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GENDER ISSUES IN TEACHER EDUCATION IN IRELAND

By

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A Doctoral Thesis

Submitted in partial fulfilment of the requirements for
the award of Doctor of Philosophy of the Loughborough
University of Technology, October 1988.

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ABSTRACT

Gender Issues in Teacher Education

in

Ireland

by

Dearbhal Ni Charthaigh

Loughborough University of Technology

In 1985, the council of Ministers of Education of the European Community agreed upon a Resolution containing an action programme for equal opportunities in education for girls and boys. One element of that programme was the inclusion of equal opportunities in the curriculum of teacher education. This thesis represents a series of developments in research and curriculum development which have resulted in a Community wide Action Research programme by the Commission of the European Communities to implement the terms of the action programme in all member states.

The thesis examines the social and occupational status of women in the Republic of Ireland in the light of the dif-

ferential education received by boys and girls. The participation of women in Mathematics, Science and Technology in particular is examined, and, drawing on the author's own data from a sample of girls in second-level schools, conclusions regarding the nature of teacher education programmes are drawn.

The central part of the thesis examines the structure of teacher education in Ireland and the place of equal opportunities in the curricula of all the institutions offering pre-service teacher education. This data is evaluated against the available data from the member states of the European Community and leads, in the final part, to a presentation of a model curriculum for the integration of equal opportunities in both pre- and in-service teacher education. Examples of the integration of gender issues in teacher education are provided from the author's own courses, and the thesis concludes with a proposal for an Action Programme to give expression to the model curriculum design presented in the thesis.

KEYWORDS:

Gender.

Equal Opportunities.

Teacher Education.

Republic of Ireland.

Curriculum Design.

Action-Research.

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The students, teachers and school principals who have participated in courses have contributed enormously to the developments described here and their experiences of working with the author's curriculum materials have informed the subsequent design of her equal opportunities programmes.

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PART I

SOCIETY, SCHOOLING AND GENDER

1. CHAPTER 1 INTRODUCTION

1.1. Author's Background

The author has worked in teacher education for fifteen years, following a brief career as a teacher of modern languages in schools in the city of Dublin. The decision to avail of a research award granted by Trinity College, Dublin, enabled her to return to full-time study towards a Master's degree in Education for which she completed research on teacher education.

The transition to Thomond College of Education, therefore, was an exciting one, enabling the author to implement some of the theoretical bases of that research in working with student teachers.

In Thomond, the author has been responsible for a range of courses in the education programme offered to students across the five full-time graduate and undergraduate programmes for intending teachers of pupils aged 12 to 18 years.

As a new institution, founded in 1972, Thomond offered a young lecturer the opportunity and the challenge of introducing new courses, and in a climate of growing interest in women's issues, the issue of gender in education was introduced into the curriculum for the first time in 1976. At first, the topic merited two lectures, but subsequently the growing research literature, (see Harvard Educational Review 1980, and Harrison and Ni Charthaigh, 1986) and the student response led to the establishment

of a full module on Gender and Education in the final year of all four-year undergraduate programmes and in the one-year postgraduate diploma. Subsequently research on gender was integrated into mainstream courses in all four years of the undergraduate courses, in addition to the module on Gender and Education. (One of these courses, microteaching, is described in some detail in Chapter 9 as an example of the developmental work undertaken in the field of equal opportunities or gender issues in teacher education.)

Given the author's background in languages, much of the early work in researching these courses was based on the analysis of texts used in classrooms, but the scope has now broadened considerably to include the structural factors of differential participation by girls and boys in education, the content of curricula, data from the social and psychological fields on gender as well as theoretical studies of gender in education. The early interest in language survives, however, and verbal interaction in the classroom has been a particular focus in both the microteaching course and in the sociology courses which the author teaches.

This work was greatly advanced by having had the opportunity to travel both in Europe and North America with funding from the Ford Foundation and UNESCO to examine research centres in Women's Studies and participate in conferences on research and teaching related to women.

A number of issues emerged from these activities as deserving of considerable study, and this thesis represents the voyage of discovery which those issues initiated.

1.2. Background and Development of Study

By 1981, research on the relationship between the education of women and their subsequent social and occupational status suggested that Mathematics was a "critical filter " in determining the life chances of women and men (Sells, 1978; Bleyer, Pedersen and Elmore, 1981). A meeting with the author of Overcoming Math Anxiety (Tobias 1978) in New York that year suggested that this was indeed a fruitful avenue for examining the issues around women's education and occupational status.

As a consequence, the author had discussions with Dr. John O'Donoghue, Head of the Mathematics Department of Thomond College, on the possibility of carrying out a study of the teaching of mathematics to girls. Dr O' Donoghue was very interested in this question, and one of the consequences was that his final year mathematics students, most of whom were, perhaps surprisingly, women, began to undertake research on this issue for their undergraduate dissertations. A number of fine studies were produced and the interest in this area of student research continues.

Much more importantly, however, Dr O' Donoghue was later to introduce the author to Professor A.C. Bajpai OBE, External Examiner in Mathematics for the National Council of Educational Awards. We discussed the questions of equal opportunities in education and the possible solutions which might be found in the teaching of mathematics specifically or in the design of teacher education courses more generally. Professor Bajpai's recommendation that this question should be pursued in a full scale thesis rather than a minor study was very welcome indeed, and began the lengthy process of reading, research and curriculum development presented in the later sections of this thesis.

1.3. The Scope of the Thesis

The thesis begins, in Chapter 2, by outlining the features of Irish society which demonstrate that there is a substantial question to be answered about the relative social and occupational inequalities between men and women in the Republic of Ireland.

The demographic data on population, marriage rates and fertility is followed by an examination of labour force participation rates and the vertical and horizontal segregation of women and men in the workplace. Finally, the relationship of education to these patterns is analysed.

In Chapter 3, a detailed examination of participation by girls and boys in the education system indicates that both the structure of educational provision and the experience of classrooms are clearly contributing to the patterns of inequity identified in the society. Chapter 4 looks more closely at the areas of Mathematics, Science and Technology for indications of where intervention in teacher education might most productively be undertaken. The author gathered the views of hundreds of senior-cycle pupils in relation to this question, and they provide compelling evidence of the intractability of the problem of promoting equal opportunities in education.

The conclusion reached at the end of Part I of the thesis is that Mathematics has a critical role to play in the education of girls, but it is not, as had been earlier thought, the "critical filter " but rather that the participation of girls and boys in Mathematics is a symptom of a wider question of the value placed on men and women in society. Thus, programmes of teacher education aimed exclusively at the Mathematics (or Science and Technology) teacher are unlikely to be effective. Instead, a broad programme for all teachers is needed to enable them to help all children achieve their potential.

In Part II of the thesis the author has researched the context for teacher education in the Republic of Ireland, and has undertaken , with funding from the Department of Education, an examination of the current status of equal opportunities in the curriculum of teacher education in

the Universities and Colleges dealing with all levels of teacher education. This research establishes that gender issues in teacher education curricula are very under-developed, despite isolated initiatives in a number of institutions. This research is then set against the experience of other countries in Europe, and establishes the framework in which the work of developing curricula in teacher education must take place. The work of establishing the status of equal opportunities in Europe was undertaken in conjunction with the standing working group on equal opportunities of the Association for Teacher Education in Europe, of which the author is secretary.

Having established a connection between education and the social status of women in Part I, and having identified the teacher education context for promoting equal opportunities in Part II, the author then presents a model curriculum for teacher education in Part II as Appendix E. This model curriculum is the core of the thesis, arising as it does from the research of the earlier sections and it presents the basis on which action to remedy the educational inequalities of Irish education should be based.

The curriculum is based on work completed in 1987 by the Association for Teacher Education in Europe for the Commission of the European Communities, in which the author was co-ordinator of the curriculum team.

Chapter 9 presents the work undertaken by the author in Thomond College, as a demonstration of the curriculum in action. The evaluation of this work was carried out with research assistance. It illustrates the complexity of items which, in the framework curriculum, appear as limited headings only.

Following these chapters, outlining the curriculum and describing its implementation in the author's own courses, the thesis concludes by presenting a plan of action for the implementation of the curriculum on equal opportunities in teacher education. A summary and recommendations for further research conclude the study.

It is all too frequently the case that doctoral research work, however valuable, does not translate into action. On the advice of Professor Bajpai, the author has been very concerned to avoid this outcome, and is pleased to report that on presenting her proposals for a two year action research programme to the Commission of the European Communities in June of 1988, as presented in chapter 10, this programme has been set in place. The author has been appointed as Consultant to the Commission to initiate, monitor and evaluate the implementation of the framework curriculum in all the member states of the European Community.

2. CHAPTER 2 THE SOCIAL STATUS OF WOMEN IN IRELAND

2.1. Introduction

The motivation for the study pursued in this thesis arose from an understanding of the inequalities in the social and occupational status of women and men in Irish society. It is essential therefore to present this data, not only that the reader may realise the significance of the problems identified but may also see that, in the later sections of the thesis, the curriculum developments proposed are presented, not in a social vacuum, but in a precise social context.

2.2. Political Context

The Republic of Ireland is a constitutional democracy, situated on the westernmost fringe of the European Community, in which it has been an enthusiastic participant since joining in 1971. Government is by a bicameral, democratically elected government and while politics do not correspond to the traditional left-right axes common in other European states, there is a trend towards such political identities and away from the traditional forms of nationalist, post-independence politics. Ireland has a written constitution, which guarantees a wide range of civil, religious and political rights to both men and women, but which nevertheless identifies a role for women which has been the subject of much debate and opposition from women's groups since 1937, when the constitution was introduced following a plebiscite.

The Article which gives particular offence is Article 41, in the section on the family, which states:

"In particular the State recognises that by her life in the home, woman gives to the State a support without which the common good cannot be achieved.

The State shall, therefore, endeavour to ensure that mothers shall not be obliged by economic necessity to engage in labour to the neglect of their duties in the home."

(Bunreacht na hEireann, 1937,p.138)

This article lends authority to a sexual division of labour in society, assigning to women the private sphere of domesticity, and in so doing, denies to single women, women in the labour force and female members of religious orders the sanction of the constitution. Despite the objections which this article has occasioned, it has never been "fully judicially interpreted by the High or Supreme court. " (Robinson, 1978, p.60)

In seeming contradiction to Article 41 is Article 45 which declares

"That the citizens (all of whom, men and women equally, have the right to an adequate means of livelihood)may through their occupations find the means of making reasonable provision for their domestic needs."

In 1970, a Commission on the Status of Women was established to examine and make recommendations on the status of women in Irish Society. Its final report was presented to the Government in 1973 and detailed wide ranging reforms. Subsequently, the Council for the Status of Women was established as the umbrella organisation for all women's groups with the responsibility for advising the Government on women's affairs. The author is currently a delegate to the Council.

The reforms initiated at this period were hastened by Directives from the EEC on equal pay and employment equality. Under the terms of these directives, all member states were obliged to introduce legislative reforms, and in Ireland these resulted in the Anti-Discrimination(Pay) Act of 1974 and the Employment Equality Act of 1977 and the establishment of the Employment Equality Agency, the counterpart of which in Britain is the Equal Opportunities Commission.

In recent years, a Ministry of Women's Affairs was established within the Department of the Taoiseach (Prime Minister), but survived only one administration, to be abolished by the present government. However, during the period of that Ministry, Ireland acceded to the United Nations convention on the elimination of all forms of discrimination against women. This necessitated the removal of remaining elements in the constitution which constituted discrimination, namely the rights to citizen-

ship of foreign spouses and the dependent domicile of women, whereby a woman's legal domicile was that of her husband, even when they lived apart.

While Article 41 still remains, the efforts of the women's movement have succeeded over the past twenty years in removing most formal legislative impediments to equality for women. However as Smyth (1987) points out, the removal of formal barriers and the achievement of equality are not synonymous.

2.3. Demographic features

Ireland has a population of 3.535 million, of which 49.8% are female. Of these 1.76 million women, 59.2 percent are of working age, that is aged between 15 and 64.

Population trends since 1961 have shown a steady increase from 2.818 millions in 1961 to the present 3.535 millions.

Between 1971 and 1981 there was a population increase of 465,200, of which immigration accounted for almost a quarter ; a surprising fact in a country better known for emigration. Most of those immigrating were young married couples, returning emigrants, a factor which contributed further to the boom in population as they settled down to rear families here.

Table 1. Population trends 1961 to 1984

	Females	Males	Total
1961	1,401,792	1,416,549	2,818,341
1971	1,482,488	1,495,760	2,978,248
1981	1,714,051	1,729,354	3,443,405
1984	1,760,100	1,774,900	3,535,000

Source: Central Statistics Office, Census data.

A number of paradoxical features emerged at this period demographically. While the birth rate was rising, the marriage rate was falling and the average size of family was also falling.

Table 2. Average age at marriage of males and females 1960 , 1970 and 1981 in selected EC member states

Country	Male		Female	
	1970	1981	1970	1981
Ireland	27.7	26.5 (a)	25.1	24.3(a)
Germany	28.3	29.3	24.9	26.1
France	26.0	27.1 (b)	23.8/24.6(b)	
U.K.	27.2	29.4	24.7	26.7
(a) 1979 (b) 1980 Source : Tansey, 1984				

In addition to a falling average age at marriage, there was a reduction in the marriage rate as shown in Table 3.

Table 3. Number of marriages as a percentage of single persons aged 15 to 39, 1971 to 1984

Year	%
1971	3.8
1975	3.4
1979	3.1
1984	2.5

Source: Working Party on Women's Affairs.p 31

Fertility rates in Ireland remain very high, in comparison to other developed countries despite a marked decline in recent years. (See Table 4.)

While Ireland heads the fertility league, fertility rates have in fact been falling rapidly since the early seventies, as we see in Table 5.

Table 4. Fertility rates in a number of developed countries for the year 1986

Country Fertility rate (i.e average
number of children born per woman)

Ireland	2.43
West Germany	1.36
France	1.84
U.K.	1.78
Canada	1.67
USA	1.81

Source: New Society, 1988, p.47

Table 5. Average annual rate of change in fertility (compounded annually) 1966 to 1984

1966-71	1971-79	1979-84
+0.2%	-2.2%	-4.8%

Source: Blackwell 1986

As the figures indicate, there was a small increase in fertility rates between 1966 and 1971 of 0.2%, whereas from 1971 to 1979 there was a decrease of 2.2 %. The decline in fertility since 1979 has been more dramatic, at 4.8%, and continues to fall in the years since.

The consequences for women of these patterns are that

women's adult working lives are becoming less dominated by childbearing and childrearing.

The consequences for education were that there was a rapid expansion of educational services, particularly from 1967, with the introduction of the scheme to provide free secondary education . Girls particularly profited from this provision as we shall see, and their participation rates increased dramatically since then (Hannan et al, 1983). Teacher education expanded rapidly to cope with the increased demand for teachers for this young population,(Coolahan, 1987) and special accelerated programmes were introduced for a period to provide needed teachers.

However, in recent years this pattern has changed substantially , with dramatic and predictable consequences for education. Increased emigration in a period of economic recession coupled with a reduction in the birth rate has meant a rapid decline in numbers in the cohorts of pupils in schools. (Davey,Kelleher, McCarthy, 1987) The consequences for teacher education have been substantial, involving the closure of one major college, and reductions in intake for all others.

For women, these changes mean that a much shorter period of adult life is now being spent in childrearing, and coupled with the increased expectations of career fulfilment, and the decline in traditional areas of employment, which include teaching, there is now a serious mismatch between the education of girls and their subsequent oc-

cupational opportunities. This issue will be expanded upon in Chapter 3.

2.4. Labour Force Participation

The participation of women in the labour force has remained relatively stable over the past twenty years (Blackwell, 1986). However, within this overall pattern of stability, the participation of married women has been rising steadily, compensated for by the fact that more young women are remaining on in education. Overall, the participation of women in the labour force showed an average annual increase of 2% per year in the seventies and 3.2 per cent per year since then. This increase is about double that for the labour force as a whole.

Table 6. Women as a percentage of those employed in selected EC states in 1985

Country	% of employed who are women
Ireland	30.8
West Germany	32.3
France	40.6
U.K.	41.6

Source: Eurostat 1988

The overall percentage for the twelve member states of

the EC is 37.2. By way of comparison, the figure for USA is 43.4% and that for Japan is 39.7%.

In common with other European countries, women's labour force participation is strongly segregated, both horizontally and vertically. By horizontal segregation is meant the clustering of women into traditional occupations such as clerical and secretarial work, teaching, nursing, services, and particular areas of manufacturing such as the garment industry. Most of these female dominated occupations are relatively low paid, and low status. By vertical segregation is meant the clustering of women in the lower paid categories or grades within any given occupation. For example, in Primary teaching, where women are 75% of the workforce, they occupy only 20% of the senior posts as principal. (Kelleghan, Fontes, et al, 1985)

As the table below illustrates, given that women are 30.2 % of all workers, they are clearly overrepresented in such areas as clerical work, where they constitute 72.2% of the workforce, and underrepresented in administrative and managerial work at 11% and also in electrical and electronic occupations and farming.

Of the occupations in which women comprise the majority of the workforce and which in turn provide most of the job opportunities for women, most are in rapid decline in the current economic climate.

Table 7. Horizontal segregation in the workforce

Labour force by selected occupational groups 1984

Occupation Ratio of women to all persons at
work expressed as a %

Farmers	4.8
Electrical and electronic workers	16.8
Leather, textile and clothing workers	63.6
Clerical workers	72.2
Professional and technical workers (including nurses and teachers)	47.5
Service workers (Including hairdressers, waitresses and cleaners)	53.8
Administrative, executive and managerial workers)	11.0

Source: Central Statistics Office, Labour Force Survey,
1984, Table 14

Vertical segregation is best illustrated by taking one example, that of the Civil Service, where women are one third of the total labour force. As the table illustrates, as one ascends the hierarchy of grades, women are a smaller and smaller percentage of the employees.

Table 8. Proportion of women in the Civil Service by selected occupational group, 1971, 1981, 1984

Occupation	1971	1981	January 1984
Typing	100	99	99.5
Clerical	80	65	63.1
Administrative and Executive	14	28	27.4
Professional	7	7	7.8

Source: Blackwell, 1986, p.32

Most part-time workers in Ireland are women, (Daly, 1986), a pattern common to the rest of the European Community in which 68% of all part-time workers are women. Of these women part-time workers in Ireland, 80.4 % are married. This indicates that family responsibilities are the predominating factor in the decision to engage in part-time work. This phenomenon was identified in Ireland as early as 1973. (Walsh and O'Toole, 1973)

Apart from those women identified in the official statistical sources, there are many others who work in the black economy as cleaners or child minders for whom it is

not possible to have accurate or adequate statistical information.

Thus, we have identified four areas which contribute to poor social status for women

1. Many are working as full-time homemakers, outside the labour force, and are therefore without independent income.

2. Of those who are in employment, most are clustered into low paid "female" occupations.

3. Within each occupation, women predominate in the lowest paid categories of the occupation.

4. The predominance of women in part-time and black economy work, ensures low pay and lack of benefits as workers.

Thus, it is easy to understand why the phenomenon of the "feminization of poverty", which has been identified elsewhere (Lewenhak 1980) is also a feature of Irish life. Indeed as pointed out in a 1980 survey on poverty (McCarthy, 1980) the largest group of families living below the poverty line were not those of the unemployed, as one might expect, but those of households headed by women.

In summary, then, the Republic of Ireland is experiencing

a period of rapid social change, where traditional values are being questioned and where changing demographic trends are altering the status of women in relationship to paid employment. A combination of factors in the structure of women's employment and unpaid work ensures that women are much more at risk of poverty than their male counterparts. In the next section we shall see that there is a distinct link between the education of women and their social and occupational status.

2.5. Education and the Labour Market

One of the functions which education serves is that of providing credentials to those graduating from the system with which they can compete in the labour market.

Equality of opportunity has been the most powerful slogan in educational debate for over twenty years. It is a slogan which needs careful examination as it conceals a pattern of inequality which has been altered only slightly in those years.

"The slogan of equality of opportunity is the assumption that education has a special role in determining the class positions of individuals. Income and status attach to occupations, and therefore the hierarchy of incomes and status corresponds to the hierarchy of occupations. This is in turn a function of the expertise, the skill entailed in different occupations. Education is seen as the

mechanism whereby people attain these different levels of skill and expertise, and if there is equal access to education, there will be equal opportunity to compete for the credentials or qualifications which the educational system provides. This in turn will enable the individual person to compete on an equal footing for jobs in the hierarchical occupational structure."

(Kuhn and Wolpe, 1978, p292)

It is not the intention to question here the existence of an occupational structure which is hierarchical; which offers differential rewards for work done; nor is it the intention to raise the issue of the unpaid work done by so many people, particularly women. If we assume the continued existence of an unequal system of rewards, and of a social class structure based on unequal rewards, what is of interest here is the issue of meritocracy in that system, i.e. whether it is the merit of certain individuals which enables them to compete successfully for educational and occupational rewards.

If this were the case, then education would be operating in a purely functional manner, by ensuring the rational allocation of individuals into jobs appropriate to their levels of attainment. Failure to use educational facilities well would therefore be the failure of the individual pupil and this will be "explained " by low levels of motivation, lack of intellectual ability, which

produce in turn low levels of participation in education, drop-out problems or poor performance at examinations.

As Lynch (1987) has demonstrated, it is precisely these assumptions that underpin educational policies in education in the Republic of Ireland, i.e., that equal opportunity exists for all pupils, regardless of social class or sex, and the outcomes of education therefore reflect the individual merits of pupils, not their social origins.

That this is not the case has been amply demonstrated (Hannan et al, 1983; Breen 1986; Whelan and Whelan 1984; Lynch 1987). It is evident from the research that the outcomes of education are strongly related to social class origins and to gender. These categories do not operate separately, but rather compound the difficulties for the individual pupil of achieving their potential. Thus, to take third level entry as an example of educational outcome, boys are generally more advantaged than girls, but, for a working class girl, the opportunities of going on to third level study are very much worse than for a middle class girl.

As we shall see in the next chapter, both the structure and the experience of schooling for girls and boys differs significantly and in ways which contribute to the disadvantage of girls. In the light of the changing social and demographic trends outlined in this chapter, this creates a situation which can only be described as

acute. As Richard Breen and Damian Hannan of the Economic and Social Research Institute have observed:

"..While the education received by girls may for the majority - though clearly not all - have been reasonably in accord with the demand of their future adult and labour market roles up to the late 1970's, this situation appears no longer to be the case. The need for change in school practice in the forms of education made available to boys and girls has, therefore, to become an important issue in debate over schooling policy."

(Breen and Hannan, 1987, pp52-53)

In the next chapter, we consider the precise nature of those features of the education of girls which create this mismatch with their future adult and occupational roles.

3. CHAPTER 3 EDUCATION AND THE SOCIAL STATUS OF WOMEN

3.1. Participation Rates

If the participation of women in education in the Republic were low, it might indicate the source of the inequalities outlined in chapter 2. As we shall see however, poor participation is not the explanation for these patterns.

The participation of all pupils in education in Ireland up to and beyond the compulsory school-leaving age of fifteen is high, and compares well with other EC and OECD countries (Breen, 1987)

Table 9. Participation of boys and girls at each level of education in 1982 and % change since 1967

Level	Girls		Boys	
	Number	%	Number	%
1st	277,822	+11.3	293,563	+12.9
2nd	159,790	+107.4	149,808	+99.7
3rd	19,542	+199.0	24,999	+68.8

Source: Working Party on Women's Affairs and Family Law Reform, 1985

The trend has been towards ever greater participation,

and if one compares the proportion of the cohort remaining on to complete second level in 1961, when only one pupil in seven did so, with the 1980's when two pupils in three complete their schooling , the extent of that growth is evident.

While the figures above do not indicate this clearly, girls do in fact participate more fully in education than do boys because of their higher retention rates at second level. The figures above show the totals enrolled, but at senior cycle in second level, girls outnumber the boys significantly.

Drop-out rates are higher for boys than for girls in all social classes, but the differences become more marked in the lower social class groups. (Breen , 1984; Breen 1986) About 8% of school leavers have never sat for any national certificate examination. A further 8% have sat and failed exams at age fourteen or fifteen, and a further 6% sit the terminal schooling examination at age 18 but fail. Of these drop-out and failing pupils, the overwhelming majority come from working class backgrounds, and most are boys. (Breen, 1984)

For every 100 boys in the upper second-level sector in 1970-71 there were 130 girls. In only two other countries, Belgium and France, was there a similar overrepresentation of girls at upper second level. The disparity in the Irish figures was however the most pronounced. In the U.K., at the same period, for every

100 boys in upper second-level education, there were only 90 girls. The corresponding figures for the year 1984-85 show a reduction in the overrepresentation of girls in Irish schools, to a level of 120 for every 100 boys.

In the U.K., girls have improved their representation , with the figures almost reaching parity. In general, in Europe during this period, the participation of girls in relation to that of boys improved, Ireland being the only exception, but Ireland remains the country with the greatest imbalance in favour of girls. (Eurostat, 1988)

3.2. Participation at Third Level

We saw earlier that girls' participation in upper secondary level education is very high in Ireland , and higher than that of boys. In third-level education, however, the pattern is reversed, though the increasing participation of girls means that there is almost parity in first year enrolments in the Universities and Colleges administered by the Higher Education Authority as the Table below illustrates. It must be remembered, however, that parity at entry to third-level, given the larger number of girls completing second-level, still indicates an underrepresentation by girls. Whereas in 1984-85, there were 120 girls completing schooling for every 100 boys, there were fewer girls than boys entering third-level education. This is a marked improvement on the picture in 1970-71, when boys outnumbered girls by almost two to one at third level. The underrepresentation of women at third

level is a feature of all EC member states with the exception of Portugal.(Eurostat, 1988, p.11)

Table 10. Women as a % of first year undergraduates, 1979-1986

Year	No of women	% of total enrolment
1979-80	3,089	46.79
1980-81	3,273	45.97
1981-82	3,638	47.56
1984-85	4,035	48.40
1985-86	4,356	49.4

Source: Higher Education Authority, Accounts and Statistics, 1979-80 to 1985-86

The disparity in male and female participation rates widens however, as students progress through Higher Education , as we see from the numbers obtaining higher degrees.

The Colleges included in the figures below are the three constituent Colleges of the National University, Dublin University and non- University Colleges awarding degrees. While it is not possible to obtain strictly comparable data for each year, we may assume that the pattern is stable across the differing groups of Colleges.

Table 11. Percentage of degrees obtained by women

	Primary Degrees	Higher Degrees
1979	40.85*^	24.42*
1982	44.06*\$	27.76*
1985	44.26*+	34.59*

No strictly comparable data is available. The figures represent different groupings of institutions of Higher Education as indicated by the following symbols:

*UCD,UCC,UCG,TCD,MAYNOOTH,NIHEL

^RCSI

\$NCAD,TCE,RCSI

^NIHED,NIHEL,TCE,RCSI

Source: Higher Education Authority,Accounts and Statistics, 1979-80, 1983-84 and 1985 - 86

A similar trend is observable in other European countries including the United Kingdom, (Acker et al,1984; Higher Education Authority, 1987).

The Effects of Social Class

The chances of an upper middle class boy of going to college are twice those of a lower middle class boy and thirteen times those of a lower working class boy. For

upper middle class girls, they are five times more likely to go to college than a lower working class girl, i.e. working class boys are relatively more disadvantaged in relation to middle class boys than are working class girls in relation to middle class girls.

Table 12. Entry to third level of cohort entering post primary school in 1976-77 by sex and father's occupational group, expressed as a ratio

Social Class Group	Boys	Girls
I Upper Non-Manual	1:1	1:1
II Lower Non-Manual	2:1	2:1
III Skilled Manual	5:1	3:1
IV Semi-skilled Manual	13:1	5:1

Source : Breen, 1984

However, it would be wrong to assume that class is therefore a more important source of inequality than gender.

When entry to third level is considered in relation to participation rates at leaving cert., which are higher for girls in all social classes, we find that girls are more disadvantaged, and that the multiplier effect of class and gender taken together means that in all social

class groups, girls are more disadvantaged than boys.

Table 13. Chances of Leaving Certificate participants entering third level education by sex and social class expressed as a ratio

Social Class Group	Boys	Girls
I Upper Non-Manual	1:2	1:3
II Lower Non-Manual	1:2	1:4
III Skilled Manual	1:3	1:7
IV Semi-skilled Manual	1:4	1:6

Social class produces more pronounced inequalities among boys than among girls e.g. ratio of 13 : 1 in chances of entering 3rd level for upper middle class boys, as against class IV boys whereas upper middle class girls are only 5 times more likely than class IV girls to enter 3rd level.

But it is between boys and girls in all social classes that the greatest differences exist. The chances for boys who have completed Leaving Certificate from social class group IV are the same as for girls in the lower middle class group II and better than for all working class girls.

The relative effect of gender, therefore, is greater than that of class, but the real issue is the way in which both operate together. They do not operate separately

and independently. It is therefore utterly simplistic to argue that class precedes gender as a source of inequality.

It is only when we look at issues over the life cycle that we can see the complete picture of the effect of gender and social class in determining the social status of individuals.

The tendency to use partial data to affirm the greater importance of class factors over gender in determining life chances for individuals is one which must be carefully scrutinised.

In the absence of sufficient research, we can do no more than claim that the intersection and interaction of class and gender must be examined carefully in the future, and that research which is so designed as to make this analysis impossible should not be funded or supported as it does not serve the interests of either women or men.

3.3. Educational Attainment Levels

As the data presented above clearly establishes that women have very satisfactory rates of participation up to the end of second level schooling, it may be suggested that it is their performance rather than their participation which results in inequitable outcomes in occupational status and access to higher education.

In 1980, girls got a higher proportion of Grade C or better in slightly over half the subjects available at Intermediate Certificate and Leaving Certificate and they consistently get a higher proportion of passes overall in examinations (Tansey, 1984). However, performance in Mathematics does not match overall levels of performance. (Greaney and Kelleghan, 1983)

Breen's 1986 study, which weights Mathematics performance heavily, therefore gives a distorted view of girls' overall performance.

In Chapter 2 we saw that women's earnings were markedly lower than those of men. This fact, set against a pattern of high participation and satisfactory attainment in education seems to contradict the notion that education serves a credentialist function. However, girls do have some initial advantages on completion of second level schooling.

In 1983, a higher proportion of girls (12.4% of girls who were school leavers) had managerial or professional jobs as against 5.8% of boys. 29.5% of girls had clerical jobs as against 8.5% of boys. The largest group of girls however, 39.7% entered service occupations (14.7% of boys) while the majority of boys (51.6%) were in skilled or semi-skilled manual jobs (15.8%), (Tansey, 1984 p.68).

For boys and girls in the 80's the level of employment corresponded to the level of attainment i.e. the higher the level of qualification obtained, the more likely they

were to find a job. For those who left school without taking any examination, the risk of unemployment was three times greater than for those with a Leaving Certificate, and as we know more girls sit the Leaving Certificate, so girls were better protected against unemployment (Breen, 1984). These advantages are temporary however, because of the nature of female employment, and are eroded within a few years.

In the case of students completing higher education courses however, the wage differential evident in the labour force generally is to be seen immediately on graduation in many cases. If we take an example from the field of engineering, the discrepancies become apparent.

Table 14. Salaries obtained by graduates from sub-degree Engineering courses 1985

Salary	% Female	% Male
Up to #3,999	11.9	15.7
4,000 to 4,999	14.2	8.2
5,000 to 5,999	23.8	17.3
6,000 to 6,999	21.4	15.7
7,000 to 7,999	11.9	11.2
8,000 to 8,999	11.9	12.5
9,000 to 9,999	2.3	7.2
10,000 to 10,999	2.3	2.9
11,000 +	-	9.0

Source: Higher Education Authority, First Destinations of

Award Recipients in Higher Education, 1985, Table 2.19,
p.73

Of students graduating with sub-degree awards (Diplomas, National Certificates) in Engineering in 1985, 9% of the male graduates were receiving salaries of #11,000 or more, but none of the female graduates. Salaries of between #5,000 and #6,000 were the commonest category; however, only 17% of males were in this category, but 24% of females. A similar pattern is evident in the salaries of those graduating with degrees in engineering.

Another feature of differential outcomes for graduates is the discrepancy between the proportions of males and females obtaining full-time permanent employment. The example of graduates in education is very striking indeed, where full-time jobs in teaching are becoming very scarce as the downturn in population, coupled with economic stringency, affects the job market. In 1984, 23.4% of male graduates obtained permanent positions in Ireland, while only 13.5% of female graduates did. The study reported in Chapter 6 establishes that the preference for male candidates was not a reflection of their higher attainments at examination, in fact the contrary was the case.

3.4. The Nature of the Educational Experience

We now turn to the nature of the educational experience

of girls and boys to see what features may explain social inequalities, which were not explainable by either performance or participation rates.

The first feature of that experience is the type of school attended. Three types of school exist in the Irish schooling system at second level: Secondary schools, which are largely religious single sex establishments and which were, in 1985-86, attended by 66% of the school population; Community or Comprehensive schools, which are state schools of recent origin; and Vocational schools, established from 1930 onwards, providing education with an emphasis on craft skills.

Table 15. Second level schools 1982-83

School type		No. of schools
Secondary	Boys	180
	Girls	206
	Mixed	130
Vocational	Boys	9
	Girls	6
	Mixed	230
Community/ Comprehensive	Boys	3
	Girls	1
	Mixed	52

Source: Working Party for Women's Affairs, 1985, p.107

The total number of mixed schools is 412, while the number of single sex-schools is 405. It might appear therefore that mixed schooling is the norm. However, Vocational schools have much smaller school populations on average than Secondary or Community/Comprehensive schools and therefore the proportion of the school population in mixed schools is actually smaller than the proportion in single-sex schools.

Coupled with the fact of smaller school size, girls are in a minority in the mixed Vocational and Community/ Comprehensive schools, so that single-sex education is, for the majority of Irish girls, the norm. Given the difference in ethos of girls' and boys' schools, this contributes to a different educational experience for the two sexes.

There is a more pronounced achievement ethos in boys' schools than in girls' schools and greater consensus among parents, teachers and pupils as to the vocational purpose of boys' education. This is not true of girls' schools in general, though of course individual girls' schools may have a very high achievement ethos.(Hannan, Breen et al, 1983)

The major study of provision, allocation and choice of subjects was carried out by a team of researchers from

the ESRI (the Economic and Social Research Institute), led by Dr. Damian Hannan and Dr. Richard Breen. The study was commissioned by the Employment Equality Agency and the Department of Labour in order to establish the extent to which curricular differences were contributing to inequality of opportunity for girls.

The report (Hannan, Breen et al , 1983) investigated the relative importance of provision , allocation and student choice and proposed strategies to increase the proportions of girls taking Mathematics, Science and Technical subjects. The study has been very influential, not only in creating new policy in Irish education but also at European level, where in a High Level Conference in 1984, Dr Hannan presented the keynote paper. In 1985, the outcome of that conference was to be a Resolution on equal opportunities for girls and boys in education, which establishes an action programme for all member states. (See Appendix A)

The findings of the ESRI team reflect those of researchers elsewhere in Europe (Byrne, 1978, Kelly, 1987) in that they establish the marked difference in the participation of girls in the scientific and technical subjects of the curriculum. To the layperson, this difference can be explained simply by differences in the preferences of pupils for areas of the curriculum, in other words , by student choice. This, however, is as we shall see, only part of the explanation.

If we examine first the ratios of girls to boys in a number of subjects offered at Intermediate Certificate and Leaving Certificate level, the pattern of differentiation will become clear.

Table 16. Sex differences in selected subject takeup: Intermediate Certificate 1980

Subject	Ratio of girls to boys
Intermediate Certificate:	
Higher Mathematics	0.86
Science A	0.72
Commerce	1.5
Mechanical Drawing	0.01
Home Economics	167.66

Source: Breen and Hannan, 1987, p.120

The Sciences and Technical subjects are taken by boys almost exclusively, while Home Economics, Art, Music and, in the case of middle class girls, Modern Languages are predominantly girls' subjects. While Mathematics is a core subject taken by all pupils, the option is open to them to choose the Lower or Pass course or the Higher, Honours course. Few girls choose the Higher course and this pattern is repeated at Leaving Certificate.

Table 17. Sex differences in subject takeup : Leaving Certificate 1980

Subject	Ratio of girls to boys
Leaving Certificate:	
Higher Mathematics	0.34
Physics	0.16
Chemistry	0.54
Biology	2.01
Applied Mathematics	0.04
Technical Drawing	0.01
Home Economics(General)	206.27

Source: Breen and Hannan, 1987, p.120

The first factor to be examined in explaining these differences in participation is that of provision, that is the extent to which schools teach the subject in question.

Outside the core subjects of Irish, English, and Mathematics , most schools teach French, Commerce and Science at Inter Cert level. The highest levels of provision of technical subjects are in the Vocational and in the Community/Comprehensive schools, while the provision of French and a second or even third language (other than

Irish or English) is more likely in girls' schools. Home Economics has a high level of provision in all mixed schools and in all-girls' schools, but in all-boys' schools it is entirely absent.

At Leaving Certificate level, the highest levels of Science provision are found in boys' Secondary schools and in Community/Comprehensive schools. The technical subjects are absent from the girls' schools, and provision is low in boys' secondary schools. This reflects the fact that technical subjects are not only gendered as boys' subjects but also classed as working class subjects. (Breen, 1986)

If we compare provision of certain key subjects at Senior cycle, the extent of the disparities in provision become clear:

Higher Mathematics is provided in 100% of boys' secondary schools , but only in 85 % of girls' secondary schools. Physics is provided in 90% of boys' secondary schools but in only 60% of girls' secondary schools. Biology, on the other hand is provided in only 75% of the boys' schools but in 100% of girls' secondary schools.

While it is evident from the above that the experience of schooling differs greatly for girls and boys depending on the school type they attend, in that different types of school make different provision of subjects, it is also the case that in the mixed or co-educational schools, that allocation rules ensure a different experience also.

Table 18. Percentage of co-educational schools making distinctions between the sexes in subject allocation

Secondary	41
Vocational	78
Community/Comprehensive	67

Source: Hannan, Breen et al, 1983 p.160

These distinctions usually occur through the timetabling of options against one another, thus Home Economics will be timetabled at the same time as Engineering Technology, or Biology, the only female dominated science will be timetabled at the same time as Physics. As the Hannan and Breen study points out, schools have considerable discretion in the area of timetabling and so conclude that this feature of differentiation could be eliminated.

The second element of allocation practice which creates differentiation by sex is that of requiring at Leaving Certificate that pupils have met prerequisite standards in , say Intermediate Science, in order to undertake Leaving Certificate Physics. This might not at first seem to have a gender dimension, but as the Hannan and Breen study reveals, girls are more likely to have been excluded from Science through provision and allocation

rules at Junior level, and therefore unable to pursue such a course at senior level. In the case of Mathematics, not only is their performance likely to rule them out of Higher Mathematics, but girls with the prerequisite grade at Intermediate Certificate level are less likely to choose the Higher course than boys of the same level of achievement.

The issue of pupil choice can now be established accurately, since it emerges that much of the variance in participation is accounted for by differential provision and allocation rules. True rates of choice can be arrived at by allowing for provision and allocation factors, and, at Leaving Certificate, this is the picture:

Table 19. Pupils choosing a subject as a % of those who may choose,

i.e., true rates of choice

	Boys	Girls
Higher Mathematics	48.7	17.2
Physics	52.9	16.6
Chemistry	43.5	27.5
Biology	49.7	55.6
History	37.6	33.4
Technical Drawing	56.3	8.9
Home Economics	6.5	44.5

Source :Hannan, Breen et al, 1983,p.134

The very great differences in true rates of choice indicate that alterations in provision and allocation of subjects, while essential, will do little to ensure that participation rates become equal. As the authors of the study say in a later paper

"Formal equality of access to a range of subjects would have little impact on differential take-up rates unless it was accompanied by changes in pupils' and teachers' attitudes and expectations."

(Hannan and Breen, 1987 p.51)

As part of their study on participation rates, Hannan, Breen et al also examined pupil attitudes. One of the measures was that of educational self-image or pupils' confidence in their abilities to meet high performance expectations.

It was found that girls, on average, have significantly lower self-images than boys even at the same level of demonstrated performance. The responses to one of the questions on this scale illustrate a feature of patriarchal ideology in schools and society. In answer to the question "how would you place yourself in your class" :

75% of boys in Intermediate Certificate classes placed themselves in the range above average to top of the class as compared with 57% of girls. The responses at Leaving Certificate level were similarly differentiated.

This finding is similar to results obtained by American researchers in the area of Mathematics, (Fennema and Sherman, 1976) and is undoubtedly related to the low takeup of Higher Mathematics by girls whose level of achievement would allow them to do so.

In the next chapter, we shall look more closely at research in the Mathematics and Science fields, which have been identified as problematic in the data presented here. In particular, we shall examine the qualitative data from pupils themselves, gathered by the author during the evaluation of an intervention project in Physics designed to tackle the area of underprovision of physics in girls' schools.

**4. CHAPTER 4 MATHEMATICS, SCIENCE AND TECHNOLOGY
IN THE EDUCATION OF WOMEN**

4.1. Non-traditional Career Choices for Girls

In Chapter 3 we saw the differentiated pattern of school experience for girls and boys in Irish post-primary schools, a pattern of subject choice which corresponds to the later patterns of horizontal segregation in the labour force identified in chapter 2. Were such differentiation functional, that is to say, were girls finding adequate employment based on traditional subject choices, then some would argue that intervention to alter subject choice is unnecessary. However, changing patterns of employment, in conjunction with changing patterns in social roles render this differentiation increasingly dysfunctional, as traditional areas of employment are declining, placing women at greater risk of low pay and unemployment in the future. (Breen and Hannan, 1987; Deem 1978)

Predictions of trends in employment indicate that the traditional areas of female employment will continue to erode, while the impact of technology will have the effect of eliminating some traditional jobs but will create others, thus implying the need for a change in subject choice and career orientation towards non-traditional areas.

The Resolution on equal opportunities for girls and boys in education adopted by the Council of Ministers of Education of the European Community in 1985 (Appendix A) makes it abundantly clear that policy must be directed towards non-traditional choices, and in particular into areas of science and technology. The aims of the action programme contained in the Resolution include the following:

"[to] motivate girls and boys to make non-traditional choices and to follow courses leading to qualifications so that they may have access to a far more diversified range of jobs.

[to] encourage girls to participate as much as boys in new and expanding sectors, within both education and vocational training, such as the new information technologies and biotechnology."

As noted in the preceding chapter, the question of teacher and pupil attitudes is however, a major obstacle to changing traditional patterns of pupil choice, and the provision of formal equality of access will have only marginal effects on take-up rates if there is no parallel programme to change pupil and teacher attitudes.

To consider the reasons for poor participation in Mathematics, Science and Technology, a closer examination of research data is necessary.

4.2. Women and Mathematics

As John Ernest notes, "the deeply ingrained attitudes and stereotypes concerning women and mathematics are a major causative factor of the observed sex differences". (in Fox, Brody and Tobin, 1980, p.57)

Two principal areas of attitudinal research are of particular interest here:

1. The perception of Mathematical ability as a male characteristic.

In one controversial study (Benbow and Stanley, 1980) differences in performances in a sample of gifted seventh and eighth grade American pupils were attributed to innate male superiority in mathematics. In the debate which followed publication of this paper, no conclusive evidence for the existence of natural sex-differences in ability has been found (Fennema, 1981; Eccles and Jacobs, 1986; Fennema, Walberg and Marret, 1985).

Indeed, it is of particular interest that in the U.K. and Ireland, the Assessment of Performance Unit and the Educational Research Centre respectively have identified that higher male achievement is not uniform across all areas of mathematics, and indeed in the Irish data, girls scored higher in all areas of mathematical performance. (The Royal Society and the Institute of Mathematics and its Applications, 1986; Shuard, 1982; Byrne,

1978). This performance advantage was eroded at a later stage, and sex differences in favour of boys become pronounced at adolescence. Examination of the content of Mathematics, differential course taking and the social context of mathematics learning lead researchers to conclude that environmental factors are the more likely explanation for differential performance.

2. Attitudes towards the social and occupational roles of men and women.

Teachers' attitudes reflect traditional assumptions about the social and occupational roles of women and men and consequently influence their classroom behaviour and expectations of girls and boys. (Moore, 1986; Fox, Brody and Tobin, 1980; Becker, 1981). This can result in

- according greater time and attention to boys, (Frazier and Sadker, 1973; Stanworth, 1983; Acker et al , 1984)
- communicating a preference for boys and placing a higher value on their educational achievement (Stanworth, 1983, Spender, 1981, Moore, 1986).

These interaction patterns are not, of course, unique to the Mathematics classroom and for that reason interventions aimed solely at the Mathematics curriculum will not promote non-traditional choices for girls and boys.

The absence of role models for girls¹ in non-traditional

1. By role models is meant the presence of women in roles

areas is another source of difficulty in the areas of Mathematics, Science and Technology, and the differences in subject takeup at third level, the source of role models, indicates that in the short term we shall not see a great change in the numbers of qualified women in these fields.

If we examine the figures for full-time students in all third-level colleges for the year 1983/84 we see that men greatly outnumber women in engineering courses while in the Higher Education Authority universities and colleges, there were 6 men for every woman in engineering. In the area of science however, women slightly outnumber men in both groups of colleges.

Table 20. Women as a % of full time students in selected courses in third level Colleges, 1983-84

Engineering	7%
Architecture	8%
Science	55%
Business Studies	49%
Art	68%

Source: Higher Education Authority, Accounts and Student Statistics, 1983-84

of authority and competence in areas not traditionally seen as female occupations who provide a basis for pupils on which to model their subsequent adult behaviour.

As the Higher Education Authority noted :

"In 1985, two-thirds of all female applicants [for third level]places expressed their first preference for "non-scientific or "non-laboratory" subjects such as Arts, Social Science, Law, Commerce, etc.Data supplied ...for the years 1983,1984 and 1985 demonstrated that the numbers of female students applying for the traditionally male dominated faculties such as Engineering and Agricultural Science are still low and have not increased over the past three years."

(Higher Education Authority, 1987 p.18)

The representation of women teaching in Higher education is equally revealing :

Women represent only 16.25% of all academics in full-time employment and are concentrated in the lower grades of their institutions. Of all women academics, 55% are involved in the teaching of the Humanities, where they constitute one third of all staff. They account for only 15% of all staff in science, while in engineering they are a mere 5% of the academics.(Higher Education Authority, 1987)

4.3. Attitudes of Girls to Physics and Mathematics

This chapter has concerned itself with identifying the

gender issues in the fields of Mathematics, Science and Technology. While the statistics on participation reveal a pattern of clear underrepresentation, they do not explain just why this should be. This section sets out to illustrate much more graphically, through the views of the pupils themselves, the reasons for this underrepresentation.

This section presents the findings from an analysis of six schools participating in a project to promote physics in all girls' schools which had not previously been participating in Physics. The author was invited by the Department of Education to act as evaluator to the project in association with Dr Colm O'Sullivan of the Department of Physics at University College Cork.

4.4. Pilot Intervention Project in Physics

The project was initiated in the academic year of 1985-86 by the Department of Education. The purpose was to introduce the subject of Physics to single sex (girls') schools which had not previously taught the subject. Later, one all-girls' school introduced Chemistry using the same model, but the comments here relate to Physics only, as this is more strongly sex differentiated as a subject and more closely linked to girls' participation in Higher Mathematics. The pupils were all senior cycle pupils, as Physics is a senior cycle option only,

and were in either the first or second year of studies towards the terminal second level examination, the Leaving Certificate, in which they would normally take six or seven subjects.

The structure of the intervention project is as follows: A project school is identified, by the Senior Science Inspector in collaboration with the schools themselves and an experienced teacher of Physics from another school is released from their own school for approximately one day per week to teach the subject in the project school. The visiting teacher also assists with the setting up of laboratory facilities and the ordering of equipment and materials for experimental work. Funding for the project enables the visiting teacher to be replaced by a substitute teacher in their own school for the duration of the project. After a period of two years, or exceptionally three, the teacher in the project school takes over from the visiting teacher. The visiting teacher continues however to offer advice and assistance on a less frequent basis.

Other schools in the region of the project school are designated as associated schools and receive advice and assistance in setting up or developing the Physics curriculum in their school.

The take-over teacher in the project school observes and assists in the classes taught by the visiting teacher and

occasionally teachers from the associated schools also attend at the project school to observe classes.

Some indication of the task facing the project teachers is indicated in Dr.O'Sullivan's draft report on the schools.

"The laboratories in the project schools vary from bright new well-serviced on the one hand, to old poorly appointed areas, on the other. In one instance (Dundalk) the laboratory used is quite unsuitable for the present leaving certificate laboratory work. Unsuitable or unpleasant laboratory classrooms must make the teachers' task that bit more difficult.

The grants available for the purchase of laboratory apparatus have been used to good effect and a reasonable core of essential apparatus is now available in all the project schools. Some schools have fared better than others because, in some cases, a quantity of older but quite serviceable equipment was available. Some good quality home-made apparatus has also been constructed and put into service in some of the schools. In most schools, however, there remains some shortage of apparatus, in particular to enable the less expensive experiments to be performed by pupils working in groups of two (or at most three) at the same time."

The project has been very successful in the schools so

far involved, and plans are afoot to extend the project to a wider range of schools in the academic year 1988-89. Of particular interest to this study are the findings from the evaluation on pupil's attitudes to Physics and Mathematics, and their perceptions of the relationship which these subjects have to their career options.

The evaluation consisted of four complementary elements:

1. Analysis of documentary material provided by the Department of Education, including previous internal evaluations by Department of Education Inspectors.

2. Classroom observation of the teaching of Senior Cycle pupils by the visiting teacher in all project schools.

3. Unstructured interviews with

- * School principals
- * Visiting teachers
- * Assisting teachers
- * Participating students

in both project schools and some associated schools.

4. Questionnaire survey of

- * Participant pupils and non-participant pupils in the project schools
- * Teachers/schools

The schools were for the most part convent secondary schools, and circumstances varied from one to another,

sometimes significantly. There was however a marked pattern of agreement among the project schools on the issues raised by the questionnaires completed by pupils.

When the responses to the questionnaires had been computer analysed and the results had been presented by the author to Dr O' Sullivan, he expressed shock at the findings, remarking that the problem of gender in relation to participation in physics had been evident to him, but had appeared to be a slight or superficial one.

" The absence of a tradition of senior cycle physics /chemistry in any school poses particular problems for teachers charged with introducing these subjects at senior cycle level. One such problem arises from the fact that science and mathematics in the junior cycle are unlikely to be taught with the leaving certificate courses in mind. This is illustrated by the view expressed by a number of assisting /associated teachers that their involvement in the project had radically altered their approach to teaching intermediate certificate science. Nevertheless, most junior cycle science in the project/associated schools will continue to be taught by teachers not involved in the scheme at present. It would undoubtedly be very helpful if such teachers could be involved in the project at least to the extent that they are aware of the (relatively few) aspects of the intermediate cer-

tificate course which are essential as a foundation for senior cycle physics/chemistry."

(Dr. Colm O'Sullivan)

4.5. Analysis of questionnaire Data

The questionnaire data was analysed using SPSS-X version 2.2 on a VAX 11 - 780 mainframe computer. The analysis looked for overall patterns in responses indicated by mean and modal scores and between schools variance. The significance of between schools differences on the individual responses could not be analysed fully, because of the small numbers (less than 5) in the disaggregated answers to many items.

The results are presented below according to the main themes of the questionnaires, copies of which are included in Appendix B. The information is interpreted in the light of the additional data collected from teachers and school principals.

All Schools responded to this questionnaire and the returns for each school were as follows:

St.Vincent's, Dundalk	18
Colaiste Bride, Enniscorthy	27
Scoil Mhuire, Longford	21
St. Mary's, Naas	14

St.Patrick's, Cork 19

Total number of responses = 99

RESPONSES FROM PARTICIPANTS IN PHYSICS

Reasons for participation in Physics.

1.I decided to study Physics because it will be useful to me in my future career.

Mean score 1.949

Modal score 2.00

There was general agreement with this statement. The highest level of agreement came from Scoil Mhuire in Longford, and there were no significant variations among the other schools. When the data from the non-participants in all schools is examined it will be seen that there is a considerable difference in attitude between the two groups on the issue of careers.

2.I decided to study Physics because it is interesting

Mean 1.657

Mode 1.0

The scores indicate very high levels of agreement. The mode in Colaiste Bride Enniscorthy was 2.00 and in St Patrick's Cork it was evenly distributed between 1 and 2.

3.I decided to study Physics because I'm good at maths

Mean 3.535

Mode 4.0

It is very evident from discussions with the pupils and from their responses to open-ended questions that Physics is perceived as very "mathematical" and that this mathematical content is found difficult by many of the pupils. The high levels of disagreement with this item therefore must be interpreted as pupils declaring that while they don't think that they are very good at mathematics, they nevertheless chose Physics. Teachers had been at pains to point out that it was not necessary to be particularly gifted at mathematics in order to undertake the course .

4.I decided to study Physics because I was encouraged by teachers.

Mean 3.02

Mode 2.0

This question should not be interpreted to mean that there were some pupils who were not encouraged by their teachers, but rather that their motivation for studying Physics came primarily from another source, such as their career choice or interest.

5.I'm glad I decided to study Physics

Mean 1.859

Mode 1.0

The results on this question are extremely positive with a mean score of 1.861 and a modal score of 1.0. Agreement with this statement was unanimous in St.Patrick's, Cork ; in St. Vincent's, Dundalk there were no disagreements but four pupils were undecided.

Perceptions of Physics

6.Physics is difficult

Mean 2.899

Mode 2.0

There is general agreement with the perception of Physics as difficult.

7. Physics is really a boy's subject.

Mean 4.838

Mode 5.0

The most extreme levels of disagreement were expressed on this point, Indeed this question attracted gratifyingly vehement comments in the margins of the questionnaire .

This must not be interpreted as the students saying that Physics is not a male domain, but rather as saying that

it should not be so.

Given the comments from the non-participants on Physics as a male domain, it is clear that the participants are aware of the traditional perceptions of Physics, and are determined to defy these norms. There is a clear awareness among the participants that they are breaking norms in studying Physics and a determination to do so.

8 I would prefer to be taught Physics by a woman teacher.

Mean 3.788

Mode 4.0

There is general disagreement with this statement. There was a high proportion of undecided responses to this item. The scores cannot be interpreted as meaning that female role models are undesirable for Physics students, but rather that the pupils were pleased with the teachers they had. In 4 of the 5 schools, both male and female teachers were working with the students, so they could not see the point of the question, as their marginal comments indicated. The issues of role models would have required a cluster of related items to tap this particular issue.

9. My parents are pleased I'm studying Physics

Mean 2.182

Mode 2.00

The scores on this question indicate that parents are in

general pleased, but the range of scores and the number of undecided participants suggest that parental involvement on the question of the participation in Physics has not been high.

10. Physics deals with practical applications which are of benefit to humanity.

Mean 1.747

Mode 1.0

There is a generally high level of agreement with this statement. This should be interpreted in the light of their comments on possible improvements in the Physics course in the area of relevance of content.

11. Please tick which of the items below you find the most difficult and which you find the most interesting in Physics

The elements of the Physics course are ranked below in order of difficulty based on the sum of scores obtained.

	Score	Rank order
a. Electricity and Magnetism	36	2
b. Light	5	5
c. Sound	1	6
d. Modern Physics	14	3
The atom and the nucleus		
e. Mechanics	42	1
. Other (Please state)	9	4

The students' ranking of the interest of the various elements of the course is as follows:

	Score	Rank order
a. Electricity and Magnetism	29	4
b. Light	50	1
c. Sound	32	3
d. Modern Physics	39	2
The atom and the nucleus		
e. Mechanics	23	5
f. Other (Please state)	14	6

Not surprisingly, interest and difficulty are inversely related, but it is encouraging that many of the more difficult areas were also seen as interesting, for example, electricity and magnetism.

12. Please write below what you think would improve the physics course you are taking.

While many of the participants could see little or no scope for improvement in a course they were clearly satisfied with (see question 5) the following were the suggestions which occurred most frequently:

1. More emphasis should be placed on practicals which students can participate in actively.
2. More emphasis should be placed on application of Physics to everyday life and to industry.
3. Less emphasis should be placed on derivations and on mathematical calculations.

CONCLUSIONS

1. Students participating in the project see a clear vocational usefulness for Physics.
2. The students perceive Physics as interesting, and this is a major reason for choosing to study it.
3. Students do not see themselves as having chosen Physics because of their prowess in mathematics.
4. Teacher encouragement was a factor in the students' decision to study Physics, but not a dominant one : vocational usefulness and interest were more significant.
5. Pupils are very satisfied with the programme.
6. There is general agreement among the students that physics is difficult.

7. There is strong disagreement with the view that physics is a boy's subject.

8. Students in general would not have a preference for being taught by a woman teacher.

9. Parents are generally supportive of their daughters' participation in physics, but do not appear to be heavily involved in discussions about this.

10. There is general agreement that Physics is of benefit to humanity.

11. Pupils identified practicals, relevance and mathematics as the areas for improvement in the course.

Pupil Questionnaire no 1: Non- participants in Physics

St Vincent's, Dundalk 46

Colaiste Bride,
Enniscorthy 21

Scoil Mhuire, Longford 34

St. Patrick's, Cork 46

Total number of responses = 244

The respondents included students who were studying Biology (the majority), Chemistry or both and a number who were studying no science subject at all. These were identified in the first question. The answers to the remaining questions were as follows:

2. Why did you not choose to do Physics for Leaving Certificate?

Please indicate the principal reason only by circling the letter (A to F) before the statement.

A. It clashed on the timetable with another subject I wanted to do

Forty four students circled this statement, of whom 6 were in Scoil Mhuire, 17 in St. Vincent's Dundalk, 4 in St. Patrick's Cork, 4 in Colaiste Bride Enniscorthy and 13 in Naas. The average for all schools was 18.8%

The average for Dundalk was 36.9%, for Enniscorthy, 23.8%; for Longford, 17.6%; for Cork, 8.6%, and for Naas, 14.2%

Chi-square was 14.70789 and there was a significant difference among schools ($p < 0.05$)

B.I didn't do well enough in Inter Cert Science to be allowed^{to} take Physics

Only two students circled this item , both in St.Patrick's.

C.Physics is too difficult

Thirty nine students chose this as their primary reason for not choosing Physics, of whom 5 were in Scoil Mhuire, 8 in St.Vincent's , 10 in St Patrick's, (of whom 6 were taking no science subject), 6 in Colaiste Bride and ten in Naas.

There was no significant difference among schools on this item.

D.Physics will not be useful to me in the career I want

Sixty four students selected this response , of whom 12 were in Scoil Mhuire, 11 in St. Vincent's , 5 in St Patrick's, 5 in Colaiste Bride and 31 in Naas. The average was 28.6%. For Dundalk it was 23.9%; for Enniscorthy, 14.2%; for Longford, 35.2%; for Cork, 13.0%; and for Naas, 38.7%.

Chi-square was 13.77685 and the differences among schools

were significant ($p = < 0.05$).

E. Physics is not interesting

Only 22 students selected this response, and there was no significant difference among schools.

F. I'm not good enough at maths to do Physics

Forty two students selected this response, of whom 8 were in Scoil Mhuire, 6 in St Vincent's, 16 in St. Patrick's (most of them taking no science subject), 2 in Colaiste Bride and 10 in Naas.

The average was 20.0%. For Dundalk the average was 13.0%; for Enniscorthy, 4.7%, for Longford, it was 23.5%; for Cork, 36.9% and for Naas, 17.3%.

Chi-square was 13.40106 and the differences among schools were significant ($p = < 0.05$)

G. I was discouraged by others (Please indicate whether friends, parents or teachers)

Mean and mode were not calculated for this item as it was treated as an open-ended response.

Only 11 students selected this response, indicating that parents and friends (equally) were the source of discouragement.

H: other reason(please state)

Of the 24 comments in response to this item the reasons offered were:

1. Physics was not available in the school at the time 2
2. I opted out because Physics was too hard 5
3. Already had two or three sciences 4
4. Did Home Economics to InterCert/ Did no Science to Inter Cert 7
5. Had never considered it. 4
6. Had no interest/ liking for Science 7

In Summary, the most significant reasons for non participation were:

1. The perceived usefulness of Physics to a career. This was strongly reinforced by the answers to Question 3.

2. Mathematics

3 Timetable clashes

4. Difficulty

3. Why in your opinion, is the number of girls taking physics low in comparison with the number of boys?

This was by far the most revealing and interesting question in the two questionnaires.

There was a clear perception of the reasons for the under-representation of girls in Physics and it is in this open-ended question that the most disturbing sense of the pervasiveness of traditional stereotypes is evident.

The principal explanations offered for girls' under-representation in Physics can be grouped as follows:

1. Careers

With the exception of St.Vincent's Dundalk, this was the most frequently offered explanation, the strongest views being expressed by pupils in Cork.

The pupils felt strongly that Physics was more useful to boys than to girls in their careers. In fact the pupils frequently expressed the view that careers were gendered i.e., that there is a concept of a "boy's career" and a "girl's career". Physics is useful in the one and not in the other. This is a particularly disturbing finding in a country which has had employment equality legislation since 1976 in common with all other European Community member states.

Typical of the comments under this heading were:

"I think because boys' careers would depend more on Physics rather than a girl's job"

"Physics is involved more in men's work than in women's work"

"It may be needed in the boy's career and not in the girl's career."

One student was not only aware of this horizontal segregation of the labour market into men's and women's jobs, but also aware of the vertical segregation whereby men occupy the higher positions within occupations:

"...boys take it because they usually take the higher roles in jobs and it might be of more use to them than girls".

Others were clear that boys and girls tended to apply for different kinds of jobs, but avoided the notion that there was such a thing as a boy's or girl's job e.g.

"In most jobs that girls apply for Physics is not needed, whereas boys require Physics for nearly all the jobs they want."

Some were convinced that differential hiring practices

existed which made Physics less useful to girls:

"Because boys would get a better job with Physics than a girl would. In general the firm would be inclined to take a boy with Physics more than a girl with Physics."

"Girls usually feel that...when looking for a job, a boy will more than likely get it".

Fortunately, some at least of the girls saw a change as in the following:

"It is possible for girls to be successful at it as the time changes, I feel also that the number of girls doing Physics will get greater as girls can now do more "men's" work."

Lack of encouragement

This was the most frequently cited explanation offered by the pupils in Dundalk where the unavailability of Physics was also very frequently mentioned.

"Boys are encouraged more by their parents to do Physics"

"I think boys are encouraged more towards science subjects."

"Some boys are pressured into taking science subjects."

"I feel girls weren't that much interested in pursuing

careers after school concerning Physics as they weren't encouraged enough!"

"Girls are now only being encouraged to take physics."

"...the main reason could be that the parents or friends discourage the person saying it's too hard or you'll regret it because only boys do Physics."

Lack of availability

In a country where single sex schools still predominate, structural factors in the provision of the subject are referred to quite often:

"Physics is a subject that is taught in boys' schools and mixed schools more than in girls' schools."

Convention or tradition

This is mentioned frequently in the pupils' responses, and not always in a way that suggests a criticism of the tradition.

"It was tradition. Boys do physics and girls do the cooking."

"It is traditional. Girls always cook and sew. Boys always do science and are not interested in home economics."

"People's opinions of girls doing physics are still very old-fashioned."

"Physics has always been considered a boy's subject. It has always been associated with careers such as Engineering which up until recently have been male-dominated careers."

Sex Differences in ability or aptitude

The assumption of prior knowledge by boys, often accompanied by a statement seeming to accept innate or biological differences in aptitude.

"Because boys tend to know more about it."

"Boys know more about the kind of thing that goes on during Physics classes."

"Because boys have a better knack at electronics work than girls. It's easier for boys also to understand scientific projects because they are more mechanically minded."

"Many girls feel they would not be able to match a boy's intelligence in this subject."

"Boys are more brainy at maths than girls."

This is frequently linked with the perception of Physics as too difficult for girls, as is the perception that Physics is a very "mathematical" subject.

Mathematics

There is an acceptance not only of the relationship between Mathematics and Physics, but of the belief that boys are better at Mathematics and therefore better suited to Physics.

e.g.:

"Boys are generally better at Maths than girls and it is usually those who do honours Maths do it."

"In my opinion, the number of girls taking Physics is low in comparison with the number of boys because boys are usually better at Maths."

"Maybe boys are more interested in that kind of subject, and find it easier because boys are meant to ^{be} better at maths than girls."

"..boys are thought to have a more mathematical brain than girls."

A revealing correction in one questionnaire read as follows:

"Because boys are more ~~intelligent~~ interested in maths

and physics involves a lot of maths."

Rare is the comment which shows an awareness of stereotypes but also offers a critique:

"Up to now, Physics was dominated by the male species (sic), because people thought and still do think girls are not as intelligent as boys; which is untrue."

On the issue of mathematics, the evaluators had noted, following our observations and discussions in the schools, the recurring issue of the mathematical content of Physics. As Dr. O'Sullivan notes :

"On further investigation, however, it appeared that the mathematics involved was of a rather elementary nature (e.g. simple algebraic and arithmetic manipulation, basic geometry, etc.). The pupils seem to lack confidence and facility in these areas rather than lacking knowledge or understanding. Thus, in this case also, the problems could probably be relieved if junior cycle mathematics teachers could be appraised of the particular mathematical skills needed. A very little additional consolidation of a limited range of topics at this level could prove very helpful later in senior cycle physics/chemistry.

The vast majority of pupils taking senior cycle physics/chemistry in the project schools had taken higher level mathematics in the intermediate

certificate. It is quite important, if the aims of the project scheme are to be realised, that as many pupils as possible are encouraged to take higher level mathematics as well as science in the junior cycle. Some intervention may be required as early as first year for this to be achieved in some schools."

In this recommendation, Dr O'Sullivan is acknowledging the need for a greater integration between mathematics and science courses in Irish schools. Given that this has been identified as early as 1970 in the U.K., (Matthews and Seed, 1970) it is perhaps surprising that it remains a problem in curriculum planning.

Perception of Physics and other Sciences

In common with the findings of the GIST project in Manchester (Kelly, 1987), the responses revealed that Physics was seen as less appealing than Biology for girls:

"Most [girls] prefer biology as it is near to life e.g., the body , animals . Physics seems to be so far removed from daily life."

Some comments revealed amusing assumptions about the nature of Physics and about male aggression, for example:

" [Boys] like messing about with experiments or blowing up the lab."

One student taking no science subject had a delightful mixture of prejudices and confusions about science:

"Girls don't do science because they are afraid of worms and cutting and bisecting (sic)."

4.6. Implications for Teacher Education

In this first part of the thesis a number of facts have been established:

- The social status of women in Ireland, as expressed by socio-economic position, is markedly lower than that of men.

- The weaker social position of women cannot be explained by poor participation or performance in education.

- Differentiation in curricular choice and in the experience of schooling is pronounced, and clearly mirrors the inequities found in the social structure.

- The participation of women in Mathematics, Science and Technology is particularly problematic and contributes to their weak social and occupational status.

- Interventions which are confined to increasing access or which are limited to one area of the curriculum, such as Mathematics, are inadequate to promote equal oppor-

tunities.

In conclusion then, the role of teacher education must be a "whole curriculum" approach, whereby all teachers understand the nature of gender issues in schools as organisations, at the personal level of their own and pupils' expectations, and at the level of classroom performance.

In Part II, we will examine the extent to which awareness of these issues has permeated the teaching and examining of curricula in pre-service teacher education in the Republic of Ireland and contrast that position with that of the other member states of the European Community.

**PART II GENDER ISSUES IN TEACHER EDUCATION IN
IRELAND AND EUROPE**

5. CHAPTER 5 TEACHER EDUCATION IN IRELAND

The development of teacher education in Ireland has been fragmented and ad-hoc in nature. Consequently, there is a variety of institutions and forms of teacher education in existence, and a lack of overall co-ordination particularly in the training of second level teachers. This situation is likely to change in the near future on publication of a major review of Irish education, and teacher education in particular, which is being conducted at present by the OECD. This is the first major study of the educational system in over twenty years since the publication of Investment in Education (OECD, 1966). This study, also conducted by the OECD, was instrumental in the major restructuring of Irish education which occurred in the '60's and '70's.

In teacher education, if one examines the developments since 1976 ², (), it is evident that while there were a number of major developments in the provision and structure of teacher education, no fundamental change occurred in the overall regulation of this field of professional development.

In 1976, the Educational Studies Association of Ireland

2. For a detailed study of developments prior to 1976, see O'Donoghue, 1978, Chapter V.

was established, and marked the growing professionalisation of teacher education. The ESAI, through its Annual Conference and the publication of Irish Educational Studies, has contributed to a greater emphasis on scholarship and research as a basis for the conduct of teacher education. This increasing professionalism is a feature of the development of teacher education elsewhere in Europe also and accompanies the trend towards promoting the professionalism of teachers through enhanced salaries and conditions of employment, more extended periods of education and training, greater emphasis on the theoretical study of education and increasing accountability. (Harrison, 1983; Knox, 1982; Scurati, 1986)

Particular developments in this period show clearly this trend. Primary teachers graduated for the first time with a B.Ed. in 1977, the new three-year degree replacing the former two-year Diploma course. To achieve this change, relationships were established between the Universities and the primary teacher training colleges.

Teachers of Physical Education, who had formerly been trained in the U.K. (in the case of male students) or in two-year courses in the Republic for female students, were now being offered a four-year honours degree programme in the newly established National College of Physical Education. This institution, established in 1972, was to form the nucleus of Thomond College of Education, from 1979 onwards, when the remaining non-graduate training programmes for teachers of craft and

rural Science were closed, and the four year B.Tech (Ed) and B.Sc (Ed) courses were introduced there. A post-graduate Diploma for graduates in Business Studies was introduced in Thomond at the same time to provide graduate teachers of Business and Secretarial Studies for the second level schools.

This creation of an all-graduate profession brought in train a number of difficulties of structure and design of courses. In particular the tension between the academic and theoretical components of teacher education was evident as the Universities took on an important function in the validation of the new degree courses. Again, this is not unique to the Republic of Ireland but a recurring theme in research on teacher education throughout Europe. (Berquin, 1985; Vonk, 1985)

5.1. Teacher Education Provision

Three distinct types of teacher education are provided in the Republic of Ireland;

1. Training of teachers for Primary schools, i.e., pupils aged four to twelve years. It should be noted that in Ireland, kindergarten level classes are part of the primary school, and no specialised teacher education is provided for this level.

2. Training of specialist teachers in specific subject

areas for the second level schools.

Teachers of Home Economics are trained in two specialist colleges, while teachers of Woodwork and Building Construction, Metalwork and Engineering Technology, Rural Science and Business Studies are trained in Thomond College of Education. Art teachers are trained in the National College of Art and Design and in two other regional art colleges.

3. Training of teachers of general subjects for the second level schools.

One year post-graduate Diploma courses are offered in the University Departments of Education, and this has constituted the mainstream form of teacher education for the second level system.

In addition to these three mainstream forms of teacher education, training courses for Catechetics teachers are provided by Mater Dei Institute.

If we examine in greater detail each of these sectors, the diversity of origins and forms of teacher will become apparent.

5.2. The Primary Sector

There are five colleges with responsibility for the

training of primary school teachers. A sixth college, Carysfort College of Education graduated its last class of students in 1988, having been closed by the Government because of the falling demand for teachers caused by the downturn in population.

The remaining five are:

Church of Ireland College of Education (CICE), Dublin
St.Mary's College of Education, Dublin
St.Patrick's College of Education, Dublin
Mary Immaculate College of Education, (MICE) Limerick
Froebel College of Education, Dublin

All these colleges are denominational and all are in church ownership. CICE is the only non-Roman Catholic institution. Admissions to the colleges are centrally controlled by the Department of Education, and candidates, with rare exceptions, must meet the admissions criteria established by the Department, (see Appendix C). Candidates may indicate their preference in choice of College, and will be allocated the highest preference possible. The exception is of course CICE, which accepts only Church of Ireland candidates.

The colleges of education are as O'Donoghue (1978, p.130) points out "essentially updated Training Colleges which were the gradual outgrowth of the system of training adopted by the Commissioners of National Education after 1831". Initially, the model of training adopted was that of a non-denominational monitorial system conducted in

Model Schools under the direction of the National Board. Women were not admitted to training until 1824, when a residence was established for them. By the 1850's, the activities of the Board had aroused the opposition of the Catholic hierarchy, and in 1863 they instituted a ban on the Model Schools and the central training institute. Parallel to this move, the Church promoted denominational education for all National (primary) schools and established the denominational training colleges. By 1883 control of teacher education had passed from State to Church when the State recognised the denominational colleges.

Church of Ireland College of Education was aided by the National Board in 1884 and managed by the Anglican Bishop of Dublin up to 1878 when it was taken over by the Board of Education of the General Synod.

St. Patrick's College for the training of Catholic male teachers was established by the Catholic Archbishop of Dublin in 1875, and since 1883 has been managed by the Vincentian order. Mary Immaculate College in Limerick was established by the local Bishop for the training of female teachers in 1901 and is managed by the Sisters of the Mercy order. St Mary's College in Dublin was established to train Christian Brothers for teaching in their own schools and still retains preferential places for members of the order, though there are very few such students now.

No action was taken on gaining independence in 1921 to

alter the control of the churches on teacher training, and while the autonomy of the colleges was limited by the Department of Education, they remained in private ownership up to the present.

Major changes occurred in the 1970's however with the move to an all graduate profession resulting in the establishment of the B.Ed. degree courses in all colleges.

The structural changes necessary to implement this change meant a new relationship between the Colleges and the Universities. The National University of Ireland (NUI), which has three constituent colleges, UCD, UCC and UCG in Dublin, Cork and Galway respectively, took on a validation function in relation to St. Patrick's and MICE which became recognised colleges of the NUI, and approved a three-year honours programme. St. Mary's, CICE and Froebel became recognised colleges of Dublin University, known familiarly as Trinity College, and had a four-year honours degree approved in line with Trinity's traditions of four-year honours programmes.

The author's interviews with Presidents of the Colleges and members of the Universities' Education Departments indicate that the relationships have been positive, though there is a clearly hierarchical relationship between the institutions.

At this period, single-sex education of teachers was abandoned in favour of co-education. As mentioned ear-

lier, applicants for admission are now in a common pool for the four Roman Catholic Colleges, and this has had an interesting effect on the sex ratio of student teachers. When separate colleges for men and women existed, each college would fill its available places, and this created an artificial ratio of two to one in favour of women applicants. Since there have always been many more women applicants than men, men were therefore accepted on lower admissions criteria than were women. With the abolition of the single-sex college, a natural ratio of male and female applicants has emerged, created by the higher demand from women for places coupled with a marginally higher level of attainment on the part of women applicants.³ We therefore have an increasing phenomenon of the feminization of primary teaching in the Republic of Ireland. This is seen as ^a problem, (Coolahan, 1985, p.231) and the matter has been raised at meetings of the Presidents of the colleges concerned.

It may well be argued that education should provide adult role models for children of both sexes, and that an education provided almost entirely by one sex is imbalanced. However, in the discussions held by the author during the survey of teacher education, it emerged that other unsustainable rationalisations were being advanced

3. I am indebted to Maire Ni Ghrada, official of the Department of Education for providing me with the figures and interpretation of this phenomenon.

for the need to reverse the trend of feminization. The two arguments advanced were:

1. That the national games⁴ would suffer by the absence of male teachers to promote them in schools. It was evident from comments that the participation of boys in the national games was the issue of concern particularly. This perception was clearly evident to the female student teachers and two college Presidents (in St. Patrick's and MICE) confirmed that women were taking optional coaching courses in the national games to enhance their employability to schools.

2. The perception that women were less able disciplinarians than men was referred to frequently in the interviews as a possible explanation for the preference for male candidates at interview for teaching positions. The author has failed to locate any empirical evidence that this is in fact the case, though were it so, the answer would not be preferential hiring of men, but additional training for women.

The programmes in each of the colleges lead to the award

4. The national or Gaelic games are hurling, Gaelic football, and camogie, which is a variant of hurling played by women.

of a B.Ed. degree, though the differences in validation arrangements mean that this is not a common programme in all colleges.

5.3. Specialist Teacher Education

The National College of Art and Design was recognised as an institution of higher education in 1976, and at that time the teacher education programmes were

- * a one-year course on Principles of Education for those holding the three-year Diploma in Art.
- * a four-year concurrent diploma in Art and Design Education for those specialising in education.

Since then, recognition of courses has come under the control of the National Council for Educational Awards (NCEA) and degree level programmes now replace the diploma courses.

In the Crawford College in Cork and in the Limerick School of Art and Design, the consecutive model is pursued under the same arrangements for validation by NCEA.

The training of Home Economics teachers is conducted in two private, church-owned institutions, who have also experienced the same shift of control as the primary teacher training colleges in the development of their degree level courses. The two Colleges are St. Catherine's in Dublin and St. Angela's in Sligo. The

former is linked with TCD and the latter with UCG.

Thomond College of Education is the largest of the specialist colleges providing teachers for the second level schools, and offers four undergraduate programmes of four years duration and one graduate Diploma in education in addition to postgraduate degrees and diplomas. Founded in 1972, the college has expanded considerably over the years, but is experiencing, in common with all teacher education colleges, a considerable reduction in funding and permitted intake in 1988. Unlike the primary sector and the home economics colleges, Thomond is a public non-denominational institution.

5.4. Non-specialist Second-Level Teacher Education

Teachers of general subjects for second level schools are trained in the one-year postgraduate diploma in education courses in Dublin University, in the constituent colleges of the NUI and in Maynooth, a recognised college of the NUI.

These patterns of teacher education are repeated in other European Community member states (Eurydice, 1986(a); Blackburn and Moisan, 1987) that is to say that teacher education varies according to the level of schooling for which teachers are intended in duration, institutional setting, and type of qualification.

5.5. Participation in Teacher Education

Following the dramatic increase in pupil numbers from 1967 onwards, the numbers of teachers rose from 6,800 in 1964 to 17,200 by 1979. However, supply has exceeded demand from that time onwards (Coolahan, 1985 p.230) and by the late 1980's, with population falling for the first time in forty years, there is a crisis in teacher education. As noted earlier this has meant the closure of one college, and reductions in intake in all other institutions.

Table 21. Numbers awarded the Higher Diploma in Education, 1979 to 1986

Year	Total graduating
1979	1,460
1980	1,250
1981	1,310
1982	1,296
1983	1,230
1984	1,205
1985	1,084
1986	1,043

Source: Higher Education Authority, 1986, p.84

Table 22. Numbers awarded degrees in education 1984 to 1986

Year	Total graduating
1984	997
1985	883
1986	905

Source:Higher Education Authority, 1984,1985,1986.

6. CHAPTER 6 GENDER ISSUES IN TEACHER EDUCATION
IN IRELAND

6.1. Introduction

This chapter presents the findings of the author's survey of gender issues in teacher education in the Republic of Ireland. This was undertaken in order to establish a baseline for the development of an equal opportunities curriculum. It was essential to establish to what extent gender issues (or "equal opportunities" or Women's Studies) was a feature of the existing programmes in all types of institution before attempting to devise a suitable programme capable of being adapted by each institution.

This kind of curricular information can usually be readily collected through questionnaires. However, this form of data collection has a number of limitations also. The design of the questionnaire will inevitably reflect the concerns and perspectives of the researcher, and may fail to identify crucial aspects of the issue to be examined. Where answers are limited to yes/no or a limited range of agreements, the real nature of the curriculum can rarely be determined and results may appear to be quantitatively rich but may in fact be qualitatively poor.

Furthermore, respondents may be prone to furnishing more positive responses than the reality should dictate, par-

ticularly when the issue is seen as a sensitive one, as is the case in all questions affecting the curriculum offerings of an institution and particularly in controversial areas of policy such as equal opportunities. For these reasons it was decided that a triangulation of methods was essential, and the survey therefore comprised the following elements:

- 1.Documentary analysis of the College or University prospectus for each institution.
- 2.Examination of admissions criteria for each institution.
3. Structured interviews with a sample of College Presidents or Professors of Education and staff from each sector based on a prepared questionnaire (Appendix D) and undertaken in the institution.
- 4.Unstructured telephone interviews with a second sample of College Presidents, Professors of Education and staffs of the institutions.
5. Analysis of the examination papers set by the institutions.
- 6.Interviews with officials of the Department of Education with responsibility for teacher education and for equal opportunities and analysis of Departmental documen-

tation.

7. Collection of curriculum ,materials from staff with an interest or involvement in equal opportunities.

This approach proved to be fruitful, with information from each element supporting and expanding on the data obtained from another source. The survey was undertaken in 1985/86, and the Department of Education provided funding for the survey.

Two elements are identifiable in examining developments on equal opportunities in education.

1. Official measures, direct and indirect,taken by the State through the Department of Education or other Ministries.
2. Initiatives taken by groups and individuals.

By outlining these very briefly, the picture which will emerge is that of a growing awareness of the necessity for change in the direction of equality, but of little observable change to date in the structures of authority and power in the education system or in the broader social system which supports it.

Summary of official measures:

Legislation:

1. The issue of equality of opportunity in teacher education has been most directly confronted in the Anti-Discrimination (Pay) Act of 1974 and the Employment Equality Act of 1977, both of which were enacted in response to directives from the EEC, and outlaw direct and indirect discrimination on the basis of sex or marital status.

As a result, the same rates of payment now apply to both married and single men and women. The requirement that women resign from civil service positions, including education posts, was removed at an earlier date (Civil Service (Employment of Married Women) Act 1973).

However, these measures have not resulted in any appreciable change in the representation of women in the decision-making positions in education. While, for example, women comprise 42.5% of the teachers in the country's Community and Vocational schools, they hold only 5.5% of the principalships. While 84% of the students in Colleges of Education are women, only 33% of the staff are women and these are clustered in the lower, less well-paid grades in the Colleges. It should also be noted that in the broader society, women's average industrial earnings, as a percentage of men's, have actually declined since 1980, (Blackwell, 1986).

2. There is no legislation in Education comparable to the Employment Equality legislation or the Educational Equity Act (Title IX) of the United States, or the Norwegian equal rights legislation. Most actions taken in Irish education are administrative measures which are not enforceable by law.

3. Code of Practice

Ireland, through the Minister for Education, has accepted the Resolution of the Council and Ministers of the EEC on an action programme on equal opportunities for girls and boys in education (Appendix A).

Administrative Measures:

There has been a dramatic increase in the attention given to equality issues since the appointment of the first woman Minister for Education, Gemma Hussey T.D.

In March 1984, the Minister established a working group within the Department of Education to co-ordinate activities relating to equality of opportunities for girls and women.

Among the chief measures taken by this group are :

a) Support for the author's research on equality in Teacher Education and for the European Community initiatives in this field.

b) Directives to school Inspectors on equality issues.

c) In-Service courses for teachers in Primary Schools which must include an equality dimension.

d) Seminars on equality of opportunity for school Principals and senior staff which, since 1984, have been attended by 3,000 representatives of primary schools and 220 representatives of post-primary schools.

It should be observed, however, that in the official report of these Seminars, the predominant view of those who attended was that equality issues were not "a significant problem in Primary Schools".

e) A seminar on equal opportunities, which included a paper on Teacher education, was held in April 1985 for members of managerial bodies in education at which the author presented a paper on teacher education (Ni Charthaigh, 1985(b)).

f) The Department of Education has issued a set of guidelines for appointments to the position of Principal of Primary School which emphasises the principles of the Employment Equality Act and stipulates that at least one woman must sit on appointments boards.

g) Guidelines for Irish publishers of school text books have been issued which will be used in future to eliminate sex stereotyping in new or revised editions.

h) These guidelines have also been applied since 1984 to the writing of examination papers for state examinations.

j) The practice whereby the sex of a candidate was identifiable in the examination number given to that candidate has been discontinued.

k) Following the publication of a study on the position of women staff in third-level education, a working party was established by the Higher Education Authority which undertook a more extended study published in 1987, (Higher Education Authority, 1987).

Curriculum Measures

1. The Programme for Action in Education 1984-87 published by the Minister for Education (1984) gives particular emphasis to eliminating sex stereotyping in schools in particular.

a) The provision and allocation of subjects equally to girls and boys.

b) The promotion of co-education through re-organisation of existing single-sex schools (in which 70% of Irish second level pupils are educated) and the design of new schools.

2. The Curriculum and Examinations Board

Among the terms of reference of the newly established Curriculum and Examinations Board is one which relates to sex differences in subject provision and subject choice. Publications from the Board indicate however, that minimal attention is being given to these issues, (Curriculum and Examinations Board, 1984).

3. Two curriculum development projects for post-primary schools have been supported jointly by the Department of Education and the EEC give particular attention to equality issues. One of these projects has developed a programme on sex roles and equality of opportunity which is now being pilot-tested in schools. The staff development aspect of this project is a valuable form of In-Service teacher education on equality issues.

Of particular interest in the evaluation report of this project is the finding that teachers in boys' single-sex schools are particularly resistant to the idea that equality issues concern them. However, the findings of the Economic and Social Research Institute in their

study Schooling and Sex Roles (Hannan, Breen et al, 1983) indicate that the most pronounced sex differences are found between single-sex schools.

The Departmental committee has funded the pilot intervention project in Physics and Chemistry, which was discussed in Chapter 4 and has contributed to the European Community funding of projects in Information Technology for girls currently underway.

Initiatives taken by groups and individuals

1.The Women's Studies Association of Ireland, of which the author is currently Chairwoman, was formed in 1984 to promote research and teaching related to women.Gender and Schooling was the chosen theme for their first conference in 1985, (see Ni Charthaigh, 1984).

2.The first report of the Joint Parliamentary Committee on Women's Affairs, published in 1984,also devoted its attention to education and again, makes specific reference to Teacher Education.

3.The Union of Students in Ireland,through its Women's Affairs Officer,is currently preparing a submission to the Department of Education on the place of equality issues in Teacher Education.

4. The Irish Association for Curriculum Development in association with the Women's Studies Association of Ireland conducted a series of seminars and workshops with teachers which has resulted in the publication, in 1987, of a Women's Studies curriculum for pupils in the 15 to 16 year old age group.

5. Finally, the developments at Thomond College undertaken by the author have made a significant contribution to the promotion of equal opportunities in education.

Thomond College of Education has had, since 1976, the only non-optional course in Teacher Education dealing specifically with equality issues for girls and women.

Thomond College is unique among Colleges of Education in Ireland in having a predominantly male student population. It also has the lowest representation of women on its staff (at 16%) of any College of Education in the Republic and none of these women holds a senior academic position. These features arise in part from the fact that Thomond is a College for the education of teachers of specialist subjects, some of which are traditionally male dominated, i.e., Wood and Building Technology and Metal and Engineering Technology.

Equality issues are addressed in the Education programme

for all students in two different ways:

- *through a ten-week module in the fourth and final year of all undergraduate programmes entitled "Gender and Schooling"

In the one-year postgraduate Diploma in Education for Business Studies graduates a similar module is offered. Content is similar to that in the undergraduate programme but includes additional material and activities specifically related to the question of new office technologies and their impact on women's employment in the clerical occupational group.

- *through the integration of feminist scholarship in the mainstream Education courses.

Chief among the courses in which equality issues have been integrated are:

- a) Microteaching, in which an interaction analysis schedule has been devised specifically to identify gender differences in patterns of classroom interaction. This is used by students as part of the programme of skill acquisition in lesson presentation, questioning and analysis of classroom interaction. A detailed evaluation of this schedule is presented in Chapter 9.

- b) Educational Technology

The analysis of sex-stereotyping in educational media and

of sexism in the language of textbooks has been incorporated into the two courses in this area.

c)Sociology

The issues of gender and schooling are incorporated into all aspects of the Sociology programme, with particular emphasis on interactionist studies of the classroom and the debate on co—education.

While these courses and other developments at the College in the areas of student research, staff development, and statements of College policy in relation to equity give grounds for satisfaction, it would be misleading to suggest that there has been any fundamental change in practice as a consequence.

While this summary of developments in the field of equal opportunities in education appears impressive, it would be misleading to suggest that the issue has become in any way central to the structure and curriculum of schools or to teacher education. It remains more an aspiration towards an ideal than a practical reality in most institutions.

6.2. Gender Issues in Teacher Education in Ireland

The context for this research is contained in recent public policy documents on Education including;

The Programme for Action in Education 1984-1987
Department of Education, Dublin 1984

The First Progress Report on the Programme for Action
Department of Education, Dublin, January, 1985

The First Report of the Oireachtas Joint Committee on Women's Rights - Women and Education, Government Publications, Dublin, October 1984

Structural features

No College or Department of Education in the Republic of Ireland discriminates directly in its admissions policies against either men or women. However, indirect discrimination occurs in those Colleges which set prerequisites which of their nature exclude members of either sex who have had a "normal" education as described in Chapter 3, that is a sex-differentiated education. For this reason the Home Economics Colleges which require attainment in relevant subjects make it very difficult for a boy to gain admission, though not surprisingly demand is very low anyway.

Similarly, in the Primary College entrance requirements, the additional points given for the music test (see Appendix C) favour girls who have more experience in this area and those points usually mean several places on the Order of Merit list for entry. In the case of Thomond College, preference is given through a weighted points system to traditionally male subjects, for certain courses, though a policy decision has been reached after lengthy debate, to remove this indirect discrimination.

At the other end of the teacher education process, the availability in very recent years (1984 and 1985) of a statistical breakdown of the destinations of graduates from pre-service teacher education courses indicates a differential pattern in first time job placement which is disquieting, (Higher Education Authority, 1983, 1984, 1985, 1986).

The numbers graduating have been declining markedly and in the period since the last set of statistics was published will have declined much more dramatically. Thus the figures for the period 1979 to 1986 are as follows:

While the figures suggest a relatively stable employment rate during a period of decline in numbers graduating, the HEA studies show that the balance of permanent and temporary positions has shifted quite dramatically in the period 1979 to 1985.

Table 23. Percentage of Higher Diploma Graduates in permanent or temporary employment 1979-1985

year	no. graduating	% employed in teaching	% in permanent positions
1979	1460	67.5	36.7
1980	1250	69.3	37.9
1981	1310	70.5	36.6
1982	1296	63.6	25.9
1983	1230	56.1	10.8
1984	1205	67.8	16.5
1985	1084	68.6	12.2

(Source, Higher Education Authority, 1983, 84, 85)

This change in the labour market has had greater impact on females than on males as the comparative figures for 1984 and 1985 show.

While 36.8% obtained permanent positions in 1985, this was very unevenly shared by males and females. 58.5% of males were in this category while only 30.5% of females were. Temporary employment shows 33.9 % of male graduates in this category, while 65.5% of women are. This indicates that in time of decline in the labour market a disproportionate share of the impact is borne by women.

Table 24. Percentage of B.Ed Graduates in Temporary and Permanent Teaching positions

Year	no. graduating	% employed	% in permanent
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		in teaching	positions
1983	901	93.6	36.8
1984	997	95.1	40.2
1985	883	95.3	36.8

Source: HEA 1983,84,85

Discussions with the College Presidents indicate that there is widespread recognition of this phenomenon both by the students and by the faculty members. They are not only aware of the greater difficulty their female graduates have in obtaining positions, but of the fact that this is true even where the females have a higher academic standing than their male counterparts. As one President put it:

"A man with one nostril above water [academically] will be employed before a woman with an Honours degree".

This differential pattern of employment is most marked for graduates from the Primary teaching colleges, and given the findings of the Kelleghan,Fontes(1985) study on the subsequent career patterns of primary school teachers, warrants attention.

The HEA data on destinations of award recipients in education coupled with the interview data indicate:

1. That the impact of decline in the labour market is being borne by women to a much greater extent through their increasing share of the temporary, part-time and substitute market.

2. That there is widespread recognition of this fact by students and faculty.

3. That rationalisations for the preference for male candidates are remaining unchallenged even where these diverge sharply from the views of the teacher educators.

6.3. Analysis of Examination Papers in Teacher Education Programmes

A study of the examination papers set in the various institutions over the period 1984 to 1986 was undertaken as part of the task of establishing the extent to which gender issues are treated in the curriculum of teacher education.

Such a study is justified by the fact that formal written examinations represent the knowledge which is regarded as high status in any academic institution. Examinations are surrounded by a very formal, public and bureaucratic set of procedures. Papers are often set many months in advance of the date of examination, elaborate security

precautions are taken to ensure that the papers are not seen in advance by students and external examiners usually check and approve the papers set. The printing of papers is undertaken at considerable cost, and they are frequently bound and made available following the examinations. The ritual which surrounds the writing of the examinations is governed by published sets of regulations, and invigilators may be employed to oversee the conduct of the examination in accordance with these regulations. These features of what Bernstein calls the instrumental order of the institution confer a high status on the examination itself and on the knowledge which such examinations seek to validate.

Current thinking on the teaching of gender issues in many countries, (Whitelegg, Arnot et al, 1982; Bowles and Duelli-Klein, 1983) would indicate that the issue of assessment of students in this area of curriculum is problematic, and traditional forms of assessment may be counterproductive as well as ideologically unacceptable in such an area of curriculum. It is therefore worth surveying the forms which assessment takes at present.

Many students experience considerable anxiety when faced with the formality of written examinations and College counselling services can be very busy at this period. The realisation that the major portion of the marks available towards a final award are given for perfor-

mance at examinations means that students' apprehension is very rational. Students are usually very familiar with the marks and standards in operation in the institution and will direct their efforts towards those elements of the programme which attract the highest marks. A recurring perception among the teacher educators interviewed was that students are more competitive than was the case in the past, and take a very instrumental view of the assessment procedures in operation in the institution, that is to say they are likely to see the grade as the product of the course taught rather than the knowledge or skills gained.

In all institutions, however, other forms of assessment exist. Projects, either group or individual, teaching practice, essay and report writing, design and make, research assignments and so forth. By contrast with the formal examination papers, the procedures surrounding these elements of assessment are relatively informal. The opportunity exists for students to discuss their work with tutors, and in some cases, to draw up together a framework for grading the work done. Some courses taught will therefore not appear on final or yearly examination papers, where the traditional essay style examination is seen as inappropriate to the content.

There is little uniformity however between the institutions on the question of which courses are or are not examinable by paper.

In UCD Educational Technology appears on the paper, while in Thomond College, this is assessed entirely through group project work. Trinity College, in contrast sets a question to be answered by viewing and critiquing a video.

Even within the examination papers themselves, there is some variation in the type of paper set. In St. Catherine's, a multiple-choice paper is set in the area of Food Science while Trinity presents some papers in advance of the date of writing of the examination, and indicates on the day of the examination which questions must be answered.

Most questions are however of the discussion or essay type, with a smaller proportion requiring students to write brief notes on a number of topics from a list. Questions in the subject disciplines, e.g., music, literature, mathematics, tend to be peculiar to that particular discipline.

Very few questions were set on the specific areas of equal opportunity and it appears that two factors determine the extent to which these issues reach the public, high status position of the formal examination paper.

Firstly, the subject matter of the paper is linked closely with the incidence of questions set and the questions identified as treating specifically with gender issues were concentrated in the social sciences

such as Sociology of Education, Psychology or Child Development. To a lesser extent the humanities, such as literature, and history offer questions in this area.

Secondly, it would appear from the lack of uniformity across the institutions that the interests of the individual examiner are the determining factor in the presence or absence of questions in this area.

This underlines again the overwhelming impression that teacher education in Ireland is a decentralised and diverse phenomenon where the institutional character and the interests of individual tutors determine the nature of the experience for the student. It may well be argued that this is, in the liberal intellectual tradition, a very healthy indication of academic autonomy and freedom, but it does mean that policies at central administrative level on such issues as gender equity are very difficult to implement on a national scale.

Gender issues examined in papers 1984 to 1986:

All published papers from the institutions were examined and questions which dealt specifically and directly with sex equity were identified.

In 1984, the following questions were identified:

Institution	Exam	Paper	Question no	QUESTION
TCD	B.Ed.	Educational Administration	Q.4	

"It is plain to an observer of organisations that women are remarkably underrepresented in the upper levels of organisations of all sorts, at least in the US, Canada and Western Europe. Illustrate the extent to which this phenomenon is revealed by research in Ireland and critically comment on the findings."

St.Catherine's Year 1 Home, Family and Society Q 2

"Most of our behaviour is learned rather than biologically determined. Discuss in relation to socialization for sex-roles"

MICE, Year 1 History paper 1 Q.3

"Early Irish Society had a remarkable concern for the rights of women" Comment.

B.Ed. History paper 1 Q. 11 b

"The modernisation of Irish Society further enslaved women. Discuss"

St Patrick's B.Ed. Introduction to Media Education Q 6

"Write a short essay on one of the following:

(list includes)

Women in the media
Stereotyping"

Thomond College B.A, Bsc, B.Tech Education paper 3,Q.6

"Describe the rationale, design and major findings of the ESRI study on schooling and sex roles. Discuss the policy implications of these findings"

Thomond College, Year 2, Education paper 1 Q1.

"To what extent does evidence support the contention that favouritism displayed by teachers in classrooms relates to the abilities, sex or social class of their pupils?"

Striking exceptions to the sporadic incidence of questions such as these are the Higher Diploma in Education papers at UCG and the Graduate Diploma in Education at TCE. In both cases a set of questions appear as a block on the paper indicating what is called in Women's Studies an autonomous course on gender issues. In the case of UCG, there are four questions set under the title "The education of women" and in the case of Thomond the three questions refer to the (unidentified) course "Women and Education" which is taught by the author.

In 1984 summer exams the questions set in UCG were

broad-ranging and comprehensive, and the only example found of a course which might be described as Women's Studies.

Q.16. Write an essay on sex-role stereotyping and covert discrimination in education.

Q. 17 Write notes on three of the following:

(a) the advantages and disadvantage of co-education

(b) (i) sex differences in cognitive abilities

or

(ii) sex differences in examination performance: do these reflect differences in ability or sex-role stereotypes?

(c) sex-differences in subject provision and student choice in either Irish or British post-primary schools

(d) women teachers and women in higher education

(e) women at work

(f) sexism, culture and education - socialisation into sex-differences.

Q.18 Would you contend that there is a specifically women's literature? Support your answer with the work of at least one woman writer.

Q.19. Write on the history of the entry of women into mass education in general or on the history of educational institutions in Ireland for the education of women.

Regrettably, this course is just one of a number of optional courses and was replaced in 1986/87 by a course on compensatory education. Therefore Thomond College remains the only institution offering an autonomous, identifiable unit on gender to all its students.

In 1984 and subsequent years, a range of questions can be identified as strongly related to gender issues though this is not a specified feature of the question. It is conceivable therefore that the related courses were taught without reference to gender, though discussions with staff indicate that this is not true in all cases. Examples include the following:

TCD associated colleges, Year three Sociology Question 3

"How far do you consider equality of educational attainment possible or desirable?"

TCD B.Ed. Irish Education Q.9

"Equality of educational opportunity has been achieved in Ireland" Discuss.

Since the wording of examination questions is usually such as to invite discussion and reasoned argument, it is incorrect to impute a particular value position to the examiners on the basis of topics included in the papers. It is however possible to discern at times, such as in the examples given from UCG above, a positive perspective on gender issues. The wording of other questions which make reference to gender could be interpreted as traditional scholarship in, for example, Psychology or Literature.

St. Patrick's, 1985, B.Ed. Education: Developmental Psychology

"Write briefly on sex-differences in psychopathology"

while others suggest a reinterpretation of traditional scholarship, for example

TCD associated Colleges, Year 1, Child Development, Q.4

"The dangers of maternal deprivation resulting from separation have been overstated. Discuss".

MICE, B.Ed, Education paper 2, Psychology of Education

" Paternal attachment is essentially of the same kind as maternal attachment (Lamb). Discuss".

In some instances, a clear value position on controversial gender issues is suggested by the wording of questions as in the following:

MICE, B.Ed, Philosophy Paper III, Q.5

"List the indications widely canvassed in Western society for "therapeutic abortion". Evaluate morally the most poignant of these special cases . In the light of this evaluation what is your view of the duties of civic society with regard to such medical procedures?"

Taking 1985 and 1986 , the pattern of questions set does not alter significantly, nor does the incidence of questions. One question was interesting in raising the issue, but not in relation to the Republic of Ireland.

UCC, Higher Diploma, Autumn 1985, Education IV, Section L

45. Consider some important characteristics of Soviet education under any three of the following headings:

[headings include]

(iv) sex equality;

Points of interest in the papers:

1. The relatively high frequency of questions on gender issues which relate to woman's family and reproductive roles.

2.The inconsistent use of non-sexist language. In some papers, there is a clear and conscious effort to avoid the use of the generic masculine, to use pronominalisation which is non-sexist and to avoid male imagery in questions. One such example is the Mathematics papers at Thomond College. By contrast, and in the same institution, the papers on the scientific aspects of physical education are striking in their use of the masculine generic.

Staff have described further courses which do not appear in the formal published documents, e.g., Equality module (UCD), Feminist Theology, (MICE and St Patrick's) Feminist criticism in Literature (St. Mary's and Thomond College). They indicate that student response to these courses is satisfactory and particularly so for women. (One respondent describes the reaction of male students as "puzzled".)

Since the survey was undertaken the structure of the curriculum at UCD has altered to a modular structure with Equality as a major theme. Gender constitutes a strand in that module. (Dr K. Lynch, personal communication)

Summary

1. Gender issues appear in the curriculum of most of the institutions in at least an indirect or occasional fashion.

2.No institution can be said to have a coherent and systematic programme on gender issues.

3.The level of awareness among staff is described by most Presidents/Professors as high, even where curriculum does not specify attention to gender issues.

4.The existence of gender issues in the curriculum is related to the appointment of particular individuals with an intellectual commitment to these issues.

In the chapter which follows, the findings of the author's survey are placed in the context of developments in equal opportunities in teacher education in other European countries.

**7. CHAPTER 7 EQUAL OPPORTUNITIES IN TEACHER EDUCATION
CURRICULA IN EUROPE**

Concern for the education of girls and women has emerged in the publications of many international bodies such as the United Nations (1986), and the Organisation for Economic Co-operation and Development (OECD, 1986) as well as through the European Community.

In all cases, these international bodies identify the crucial role of the teacher in promoting equality for girls and boys. As the OECD comment:

"Teachers have a pivotal role in developing the attitudes, skills and expectations of pupils, largely through their own attitudes, skills and expectations. Thus, the training of teachers in an understanding of sexism in society and, in practical terms, the ability to identify and correct sex-biased aspects of their own teaching behaviour is basic to changing the educational experience of girls and boys in classrooms."

(OECD, 1986, p.5)

Given the level of official agreement on the need for such teacher training, one might conclude that courses and programmes were to be found in all developed countries. As this chapter will establish, that is far from being the case and even in those countries such as Norway, where the status of equality (or Likestilling as

it is called in Norwegian) is far higher and more fully supported by legislation than elsewhere in Europe, there is a great deal of work to be done yet in translating the excellent plans of the Ministry of Education into a practical reality in schools and colleges.

No research had been undertaken at European level on the status of equal opportunities in teacher education up to the year 1986, when the author, as Secretary to the equal opportunities group of the Association for Teacher Education in Europe, undertook the task in collaboration with the network of researchers and teacher educators established through ATEE.

This special group within ATEE was established by Anne-Lise Arnesen, Director of the Equal Rights Secretariat of the Norwegian Ministry of Education and achieved formal status as a standing working group of the Association in 1985. The group had set itself the task of presenting research papers on equal opportunities at each Annual conference ^{and} of undertaking a study of the status of equal opportunities in teacher education in each of the countries represented in the standing working group. The author presented discussion papers based on the work for this thesis, (Ni Charthaigh 1985, 1986 and 1987) and was requested by the group to draw up a proposal for the Commission of the European Community which was accepted. The author was appointed co-ordinator of the curriculum team.

Ms Arnesen was invited by the author to co-ordinate the collection of national status reports from the member

states, that for Ireland being provided by the author, and based on the material in the previous chapter. A teacher educator was commissioned by the co-ordinators to furnish these reports, and this original material, which remains unpublished, forms the basis for the European comparisons analysed here. The reports were used by the author in designing the curriculum framework subsequently presented to the Commission of the European Community and proved to be a very essential feature of our work.

It had not proved possible to obtain information on Italy, the Federal Republic of Germany and Luxembourg, but following the author's presentation at a meeting of the European Community Working Party on equal opportunities in education, in 1988, the representatives of the Ministries present volunteered to undertake this work for the coming year, where it will be an additional resource for the author in her work as consultant to the commission.

All representatives of the Ministries of Education of the member states were particularly pleased that the curriculum had been designed in the light of an awareness of the varying conditions and structures of each member state and that flexibility and adaptability to local conditions was emphasised throughout.

As comparisons among member states are a sensitive matter, the co-ordinators, in the final report (Arnesen and Ni Charthaigh, 1987) chose to summarise the position

overall in the community and to present the report on each member state only to the officials of that country. As the report comments:

"The overwhelming impression from the National Status Reports is that, while there have been many initiatives on equal opportunities in education generally, the development of curricula on equal opportunities in teacher education in the European community has been minimal. Therefore this report is an important first phase in the Commission's work of promoting equal opportunities in teacher education and consequently in all spheres of education."

(Arnesen and Ni Charthaigh, 1987, p.22)

7.1. The Structure of Teacher Education

The structure of teacher education in the European Community is very similar in many respects to that described for the Republic of Ireland. The training of teachers for the different sectors and age groups is conducted in different institutions, with differing requirements as to admissions criteria, duration, teaching practice and academic awards, (Eurydice 1986 (a),; Blackburn and Moisan, 1987).

The major changes described for Ireland, such as the move to an all-graduate profession, the lengthening of courses, the amalgamation or linking of the Universities

with colleges of education are all features of trends elsewhere in Europe. Similarly, the current crisis of recruitment and employment caused by changing population trends is a marked feature of European teacher education as a whole. Consequently, in-service training of teachers is becoming increasingly important, though in some countries it is seriously underfunded. This is an acute problem in Ireland, (Coolahan, 1985, Coolahan, 1987).

7.2. Responsibility for equal opportunities in education

We turn now to a more detailed examination of the current status of equal opportunities in the individual member states, beginning with the issue of the central organisation of equal opportunities in governmental agencies.

Unlike the case of Norway⁵ (Arnesen and Stromberg, 1986) no member state had a special unit with responsibility for equal opportunities within education. In some countries however, equal opportunities in education was one of the responsibilities of a particular unit or a -----

5. Norway is not a member of the EC, but is taken as a reference point here because of its more advanced stage of development in equal opportunities in education generally and specifically in teacher education.

committee within the Ministry(e.g.Ireland, Belgium).In some cases, as in Portugal, a single person discharged the responsibilities for this area. In France, the Delegation on the Status of women, which replaces the former Ministry of women's Affairs since 1986, has one representative from the Ministry of Education. (Tournier, 1987).

Norway, in common with Finland (Lahelma and Ruotonen, 1986), has the advantage of legislation in the field of education which extends equal opportunities to schooling provision. This provides educators with greater leverage in promoting initiatives in the field than is the case where equal opportunities operate through guidelines only or codes of practice. However, Denmark, the only Scandinavian country within the European Community, has no such provision (Jacobsen, Krogh-Jespersen and Kruse, 1987).

Policies on equal opportunities or "emancipation" as it is referred to in the Netherlands are seen by the Ministry there to be a necessary part of all education policy, and a co-ordinator has been appointed within the Ministry of Education.

In Spain, in 1983, an autonomous institution with official support from the Ministry of Culture called the Instituto de la Mujer was established. Education is included in its brief of research and policy formation. Subsequently, the Ministry of Education and Science

created a commission to co-ordinate and supervise all the activities related to equal opportunities in education, though again no special unit exists in this field, (Pujol Fece, 1987). In Greece, the issue of equal opportunities in teacher education is handled within the European Community Directorate of the Ministry of Education, (Papadaki, 1987) while in francophone Belgium, where there are many interesting initiatives in education, responsibility for equal opportunities in education rests with the secretary of administration at the Ministry of National Education (Plateau, 1987).

In the UK a section within the DES handles responsibility for equal opportunities issues (Appleton, 1987).

7.3. Curriculum Control in Teacher Education

The degree of centralised control in education is an important aspect to be considered in curriculum innovation, as it will determine the ease with which reforms can be implemented, the extent of variation in the curriculum which must be devised for local circumstances and the measure of official support which will be forthcoming.

In the case of Norway, education and teacher education are very tightly controlled and very centralised, with a common curriculum in all institutions. This makes innovation more uniform throughout the system whereas in the Netherlands, for example, the recognition of the right to "educational freedom" precludes such directives. However, a series of education Acts set down regulations covering

length of courses, curriculum, admissions and examinations and the criteria for teachers, (Mortiers, 1977).

This is typical of the situation in most countries, and the degree of central control is generally strongest in relation to infant and primary school teaching and weakest in relation to the training of teachers for the upper secondary level. Training programmes for University faculty and College lecturers are beginning to receive more attention, but are not high priority however. It is a matter of considerable significance to a professional teacher educator that professional knowledge and skills, as distinct from academic knowledge and skills, are deemed of lessening priority as one moves up the educational hierarchy from kindergarten to primary school to second and third level. The current emphasis on increased accountability may surely alter that particular perception, but the Universities have interpreted their accountability more in terms of research and research funding than in terms of the quality of their teaching. The recommendations of the CATE report, (McLelland, 1988), would indicate that for teacher educators in the UK however, a different set of priorities may prevail.

7.4. Initiatives on Equal Opportunities in Education

Belgium

Two parallel structures for education exist in Belgium,

one for the Frenchspeaking regions and one for the Flemish or Dutch speaking regions. While in the Dutch speaking Ministry of Education no special person has been appointed to deal with equal opportunities in education, in francophone Belgium these issues are handled through the the secretary of administration at the Ministry, (Van Unen, 1987; Plateau, 1987).

Looking at initiatives in the Dutch sector first, we find that "In 1980 an educational committee was established to stimulate full equality for men and women in society. Within this committee there is a working group on teacher training and co-education", (Van Unen, 1987 p.2).

This group initiated in 1984/85 activities in primary teacher training colleges, on the basis of which a project on equal opportunities was begun in several colleges, and five lecturers were given half-time release to work on the project. No final report is available on this initiative.

The committee is aware that there is a lack of policy in this area and has produced a number of papers outlining their views on the appropriate place of equal opportunities in education including teacher education. One such paper deals with the integration of equal opportunities in the curricula of teacher education at all levels of schooling, and indicates that:

1. equal opportunities is one of the elements on which innovation should be built.

2. equal opportunities should not be a separate subject but should be integrated in all discipline areas.

3. equal opportunities should be dealt with under the headings of pedagogics, psychology, didactics and social skills.

4. equal opportunities should emerge in all elements of teacher education including attitude formation, language, teaching methods and subject matter.

(Van Unen, 1987, pp4-5)

In francophone Belgium , a Commission for Equality of Opportunity between girls and boys in education was established in 1979, and it too has published a number of papers on equal opportunities, but unlike the Dutch sector, has not included in any of these nine papers any reference to initial or in-service teacher education, (Plateau, 1987, p.2). However the official in charge, Mme Ruhl, has indicated in discussions with the author that there is considerable enthusiasm for the proposal contained in this thesis and a desire to participate in the programme of action proposed in chapter 10.

Of the initiatives pursued by the Commission the major emphasis to date has been on eliminating sex stereotypes

from textbooks, promoting co-education (Belgium, like Ireland has still a considerable number of single-sex schools) and encouraging girls into science and technology. As Plateau comments " no coherent plan of action in terms of teacher education as to gender issues has evolved" in spite of the number and range of initiatives in education.

Denmark

In Denmark, responsibility for equal opportunities in education rests with an individual in each of the five Directorates of the Ministry of Education. The main focus of their work has been the promotion of a plan of action to direct girls into non-traditional careers or those with good employment prospects.

While a national curriculum framework for teacher education has been drawn up, there is no specific reference to equal opportunities in that framework. As Jacobsen et al point out, however, the topic appears frequently in examination papers of both initial and in-service teacher education courses (Jacobsen, Krogh-Jespersen and Kruse, 1987, p.8).

In relation to the programme on non-traditional career choices, special courses for inspectors of schools and form master/mistresses were developed and courses for career guidance teachers have also dealt with equal op-

portunities specifically.

Courses for teachers at Gymnasia or upper-secondary level have also been developed and by 1987 a total of 320 teachers had attended. Follow up activities including action plans for each school are now being pursued.

The Royal Danish School of Educational Studies is a research institution which also offers postgraduate degrees in education. Its curriculum offerings at present include twelve courses which either deal specifically with equal opportunities or which integrate equal opportunities into the main theme of the course.

France

As noted earlier, a Delegation on the Status of Women has responsibility nationally for equal opportunities issues in education as part of its brief. In a survey carried ^{out} in five colleges by the Delegation and the Correspondent at the Ministry of Education, results indicated that attitudes and behaviour remain traditional despite some progress, (Tournier, 1987, p.3). As a consequence the Delegation launched a number of initiatives in the field of education.

In order to promote non-traditional career choices, a bursary was established in 1986/87 for scientific and technical careers with remarkable results. Of the 50 who qualified for the bursary through competition, 40 are now

pursuing careers in engineering studies.

In teacher education at a structural level, action was taken in 1987 to eliminate separate competition for admission to training courses. This had been introduced to limit the feminization of primary school teaching, a phenomenon already referred to in the case of Ireland.

At the level of curriculum intervention in teacher education, an optional course of sensitisation to equal opportunities issues has been introduced in the newly established regional pedagogical centres for the training of second-level teachers. A more detailed programme of study is being developed for form teachers and guidance counsellors because of their crucial role in advising pupils on courses of study and careers, but again, no coherent programme of teacher education on equal opportunities exists nationally.

Greece

In Greece, where the structure of teacher education is undergoing a major change, the existing pedagogic academies are being closed in 1988, and responsibility for offering an extended graduate course of studies is being transferred to the Universities. The autonomous character of the Universities as independent institutions means that no common curriculum exists and no policy on equal opportunities in teacher education has yet been

detailed by the Ministry of Education . In the view of the official responsible for equal opportunities at the Ministry, who is also author of the national status report for the Association for Teacher Education in Europe, it will prove much easier to implement a curriculum in the area of in-service education where the Ministry of Education will have central authority in devising the curriculum. The author has had a number of meetings with Ms Papadaki, and is of the opinion that the level of commitment in Greece is such that the proposals contained in this thesis have been particularly welcomed and are likely to bear fruit in the coming years.

In common with Belgium, the view of the Ministry is that equal opportunities should be integrated in all aspects of teacher education, and especially in those subjects with a social dimension and impact such as sociology, psychology and pedagogy .⁶

Netherlands

While it is the view of the Ministry of Education that

6. The term pedagogy causes some confusion to anglophone teacher educators who understand it to mean teaching methods, whereas in European usage it denotes theory of education , the term didactics being applied to teaching methods.

"emancipation" should form part of all education policy in the Netherlands, there are no central directives as regards the content of any teacher education programme. There are however, controls on output in the form of examination regulations. The Dutch tradition of freedom of education enshrined in legislation since 1848 means that the system is very decentralised, and the current trend is towards even greater autonomy for individual institution of teacher education, (Mortiers, 1987, p.7).

However, central policy on emancipation does exist and the plan published in 1985 included education among its concerns. Developments in the field of primary teacher education are by now well advanced but the training of second-level teachers does not yet deal with equal opportunities in any systematic manner.

Specific initiatives have included the following:

In 1983 a three-year programme was established for second level training colleges to develop equal opportunities activities. The experiment was concluded in 1986, having failed to generate any structured, integrated policy.

In 1984, experimental in-service courses in equal opportunities were begun in four locations. These were aimed at the primary level and were conducted by teacher education colleges in association with the schools' advisory service and local schools. Funding was terminated in 1986.

From 1987 onwards, a new programme funded centrally will develop materials in pedagogy and didactics and in the subject matters of the disciplines which can be adapted to initial and in-service programmes. Again, however, much will be left to the initiative and executive responsibility of individual institutions.

Portugal

While there is no special unit dealing with equal opportunities in education in Portugal, there is a body responsible at national level for European Community programmes in equal opportunities which undertakes co-ordination of activities in schools and colleges in this field.

The Constitution of the Portuguese Republic assures, in Article 13, the equality of all citizens regardless of "race, sex, religion, political or ideological convictions, education, financial or social situation". In the sphere of education the Educational Act no 46 of 1986 asserts in Article 3 that:

"The educational system is organised in a manner which ensures equality of opportunity for both sexes, specifically through the practice of co-education and scholastic and vocational guidance and by increasing the awareness of the parties involved in the educational process to this end".

(cited in Belard, 1987,p.1)

The most significant initiative on equal opportunities to emerge in the context of such constitutional assurance is the Protocol signed in 1984 between Sweden and Portugal to establish a joint programme in the following spheres.

- * study programmes
- * teacher education for all levels of schooling
- * training of personnel in the Ministry of Education and Culture
- * production of teaching materials to promote attitudinal change.

It is the intention of the group responsible for implementing the protocol that the curriculum of teacher education will be revised gradually to promote equal opportunities. Should the Ministry decide to make specific proposals to insert a programme of equal opportunities in the initial training programmes for teachers, it is expected that this would be readily implemented. In common with all the other member states of the European Community who have examined the author's proposals for such a curriculum the Portuguese authorities see them as providing the appropriate context for these possible developments.

Spain

In common with the other European Community states, the development of equal opportunities in teacher education in Spain has depended very largely on the commitment of individuals up to this point. However, the Instituto de la Mujer has, since 1984, financed an annual conference on Women and Education. Since the publication of the European Community Resolution on equal opportunities for girls and boys in education in 1985, the Ministry of Education in Collaboration with the Instituto de la Mujer has established a permanent working group to co-ordinate action on equal opportunities in education.

Courses in teacher education have been very few in number; one example is the development in Catalonia of a course on equal opportunities as part of a programme of school reform. In that region, the forthcoming policy document on school reform will contain a statement of the principle of equal opportunity, (Pujol Fece, 1987, p.6).

The author addressed a group of teacher educators at the University of Barcelona in September 1988 on the issue of curriculum design in equal opportunities for teacher education as part of the programme of activities surrounding this work of school reform and curriculum renewal. Arising from this lecture, a working group has been formed in the University with links to the Autonomous University of Barcelona and there are encouraging signs that this initiative will lead to future

developments.

The United Kingdom

The control of teacher education in the United Kingdom is vested in the Department of Education and Science and responsibility for equal opportunities lies with a sub-department of the DES. Teacher education in England and Wales, in Scotland and in Northern Ireland is very diverse, and while there are few institutions who do not deal with equal opportunities in their programmes there is no consistent or uniform approach. In Northern Ireland, recent developments at the University of Ulster have included the appointment of a Professor of Women's Opportunities, (a strange title indeed but one which is being very ably and professionally interpreted by the incumbent, Professor Celia Davies) and the establishment of a Centre for Research on Women.

Since 1984, however, control in the case of England and Wales has become more centralised through the setting up of the Council for the Accreditation of Teacher Education (CATE). In an Annex to circular 3/84 establishing CATE there are two references to equal opportunities:

para.11 "Students... will need to learn how to guard against preconceptions based on the race or sex of pupils"

para 13 "Institutions should ensure that selection procedures at all stages provide equal opportunities

for all applicants irrespective of race or sex"
(cited in Appleton, 1987, p.2)

The hope has been expressed by many of the author's British colleagues that these rather vague items may be replaced in the forthcoming Education Act by a more detailed statement of the policy regarding equal opportunities.

The Equal Opportunities Commission, based in Manchester, also deals with this field and has a special education and training division which is currently examining the status of equal opportunities in teacher education in England and Wales. Many Local Education Authorities have appointed equality officers, and in 1987 over 70 LEA's had an adviser in the field.

7.5. Conclusion

In conclusion, it can be seen from the data that no country compares with the developments in Norway in equal opportunities in education and especially in teacher education. While a number of the initiatives in individual member states of the European Community are promising, there is no coherent or comprehensive approach to the issue. In this it can be said that Ireland is very typical of the patterns of its sister states in the community.

As pointed out in Chapter 6, the presence or absence of

individuals in institutions of teacher education committed to equal opportunities appeared to be ^{the} determining factor in whether equal opportunities appeared in the curriculum. As the OECD group commented :

"Successful training of teachers and counsellors requires encouragement from above: it should not depend on the uneven availability of a few motivated individuals among the teaching staff."

(OECD, 1986, p.5)

The commitment of the European Commission and of the officials responsible for equal opportunities in education to the development of the curriculum presented in the next chapter is the most hopeful sign that the necessary "encouragement from above" is now forthcoming.

**PART III CURRICULUM DEVELOPMENT FOR EQUAL OPPORTUNITIES IN
TEACHER EDUCATION**

8. CHAPTER 8 The ATEE Curriculum

8.1. Introduction

"He who can, does. He who cannot, teaches."
(Maxims for Revolutionists)

There are those who would add to Shaw's famous dictum "And those who cannot teach work in teacher education". However others may trivialise the work of teacher education, it does have a multiplier effect in the education system in that those who study education in turn teach thousands of young people in formal and informal educational settings.

With this in mind, the Committee on Equal Opportunities in Education of the European Community has funded development work on the curriculum of teacher education with a view to promoting equal opportunities for girls and boys in education. This work has been carried out by the Association for Teacher Education in Europe in two phases.

The first phase was the design of a curriculum on equal opportunities for teacher education and the examination

of the status of equal opportunities in each of the member states of the European Community.

8.2. The process of designing the ATEE Curriculum

In 1984, the Standing Working Group on equal opportunities of the Association for Teacher Education in Europe was formally established. This was the outcome of activism and lobbying on the part of a number of ATEE members. By that time, a considerable network of teacher educators had been established, and this network has continued to grow in the intervening years.

At the Annual Conference in 1985 a programme of activities was agreed upon by the members of the Standing Working Group which involved the presentation of National Status Reports on the status of equal opportunities in each country represented. Contributions of theoretical and research papers formed the foundations for our thinking about a design for a curriculum which would have applicability generally throughout Europe. In order to pursue the programme of activities we had set ourselves, the author was prevailed upon to approach the European Community in Brussels in October 1984 with a proposal for the funding of our project.

The time was ripe for such a proposal because, at this time, the Commission was setting up a Working Party to implement the Resolution of the Council of Ministers of Education of the European Community which contains an action programme to promote equal opportunities for girls

and boys in education. Based on the terms of the Resolution, the author drafted a proposal which was accepted fully.

It was Spring 1987 however before we had confirmation of a grant to pursue the work of preparing a report for the Commission by October 1987. In the meantime the Standing Working Group had continued its programme of activities at our Annual Conference in 1986.

On receipt of the grant, the author as coordinator invited Anne-Lise Arnesen, Chairwoman of the ATEE equal opportunities group, to collaborate in the work of the project and a structure was created to facilitate the completion of the report in the brief period then available .

It was a requirement of the Commission of the European Communities that information on each member state be gathered, and this was to prove a very difficult task as our network within the Association for Teacher Education in Europe did not have a representative from each member state. Ms Arnesen therefore cast far and wide in the professional ranks of the Association for Teacher Education in Europe and teacher education throughout the Commission of the European Communities for suitably qualified people to research the status of equal opportunities for our report and succeeded in finally making available reports from all but three of the twelve countries. These reports were then analysed by Ms Arnesen

with collaboration from Erling Stromberg of the Ministry of Education in Norway, and used as a basis for the formulation of strategies which is contained in the final report.

The full text of the report containing the curriculum and the strategies for implementation is reproduced as Appendix E.

Designing the Curriculum

A small group from among the members of the Standing Working Group of ATEE was formed to facilitate the work of designing the curriculum itself. As coordinator and chair of this group, the author selected 5 members from Norway, the Netherlands and Spain. We met for two weekends, once in London and once in Amsterdam, for intensive work on the curriculum. Two documents were used as a starting point for our often heated discussions: one the model-plan for equal opportunities in teacher education in Norway, and the other a specially prepared report produced by a team of Dutch teacher educators from the Standing Working Group.

Taking as a starting point the Norwegian model-plan for equal opportunities in teacher education and a paper submitted by a team of Dutch teacher educators, the author prepared critiques of these documents and set the agenda for the meetings of the curriculum team. From these critiques and our first discussions, an outline of the

structure of the curriculum emerged.

The author then drafted and redrafted the curriculum, with useful collaboration from Ms Arnesen during intensive working weekends in the author's home, where the acquisition of an Amstrad PC 1512 had radically improved the speed and efficiency of preparing the text.

The second draft was then circulated to 47 members of the ATEE network prior to the 1987 Annual Conference in Berlin seeking comments and criticisms and, by October, an amended version was presented in Brussels. The Commission decided to receive the report in its form at that time in order that the lengthy process of translation for members of the EC Working Party could begin.

The report was on the agenda of the meeting of the EC Working Party in March of this year, and was presented in an address by the author. The response from the national representatives exceeded all expectations; each country commented, and commented very favourably, indicating their eagerness to implement the curriculum in their own state.

On the basis of this response by the Working Party, it was agreed to implement a two-year action-research programme to implement the curriculum.

"Equal Opportunities for Girls and Boys" : the curriculum

The term "equal opportunities" is used in a very restricted and limiting sense in European Community documents (see for example Appendix A - the Resolution on equal opportunities for girls and boys in education 1985) and focuses narrowly on issues of provision and access in education.

Rather than provide a single narrow programme of this nature ATEE instead chose to design a number of curricular models which are based on a Women's Studies approach in aims, content and methodologies. Social change through the transformation of education is the basis for the design, and content ranges very widely on the issues of gender, race and social class incorporating the historical and cross-cultural dimensions of feminist scholarship.

In this way it is hoped to avoid what Popkewitz calls:

"lessons on sexism which do not relate to the structure of professional consciousness and the ideologies of schooling."

(1984, p.8)

8.3. Critique of ATEE curriculum

The strengths of the curriculum reside in the following features:

1. Flexibility

2.Comprehensiveness and depth of coverage of gender issues

3.Recognition of diversity in teacher education and in national situations.

Flexibility

The curriculum makes clear at all times that it is not a prescription for practice, but rather a framework within which practitioners can develop appropriate curricula for specific target groups and precise settings. This flexibility of approach was a controversial issue in the curriculum team, with certain members insisting on a very detailed presentation of one approach as the "correct" and "only possible" approach. While respecting the appropriateness of that particular model for the circumstances (in the Netherlands) which the team members had developed successfully over many years, it was the author's view that

a) a rigid imposition of curricula is to be avoided in the interests of academic freedom, cultural diversity and, ultimately, in the interests of the successful implementation of equal opportunities policies in each member state.

b) Specific social issues which were features of the Dutch model were of a particularly controversial nature where certain countries are concerned and would, if given the

preeminent position sought in the Dutch model, have brought the area of equal opportunities into disrepute with the educational authorities of those countries. While the curriculum is emphatic that its goal is one of social change, that change must occur within specific cultural and historical contexts in each country.

c) In addition to flexibility in relation to the content and value positions of the curriculum, flexibility in relation to the teaching methods to be proposed was to prove a very controversial issue. Specifically, there was an insistence by some members that only experiential and process methods could be employed; a view which saw attitudinal change as the principal aim of the curriculum.

The view which the author proposed was very different and in the final document it was this view which prevailed.

In the author's view, much of what has been offered in teacher education to date lacks a sound intellectual core based on research in Women's Studies and Educational Studies. Rather it takes a "soft" approach to equal opportunities, avoiding the rigour of academic study and research and fails to integrate affective goals with cognitive goals.

The aims incorporated in the curriculum were to place due emphasis on the cognitive as well as the affective and on the development of professional competencies. Consequently, the teaching approaches adopted include lec-

tures, research projects and task-based workshops as well as the experiential, consciousness-raising approach espoused by the Dutch team.

d) Finally, it was the author's contention that to impose a rigid didactic approach was an affront to the target group for whom the curriculum was intended, namely teacher educators, to whom the selection of appropriate teaching strategies is a matter of professional competence.

Given the controversy which these principles created, it was particularly gratifying when presenting the curriculum to the European Community Working Party on equal opportunities in education that the principle of flexibility was commented upon by the national representatives as a particularly positive feature of the curriculum.

2.Comprehensiveness and depth of coverage of gender issues

Given the emphasis noted above on the cognitive aims of the curriculum , it is not surprising that a comprehensive presentation of content areas was produced. While this makes the curriculum appear content laden, it is a necessary corrective to the dominance of process based, content-less, anti-intellectual approaches so prevalent in areas of social action.

Again this feature of the curriculum was to prove particularly welcome to the European Community Working Party, and it was noted that the curriculum represented a major shift for the Commission of the European Communities away from superficial activities towards a more in-depth and research-based perspective, which it was felt would affect change more profoundly in the longer term.

3. Recognition of diversity of national and structural contexts

The curriculum does not assume a common structure in teacher education, and for this reason presents three separate (though often parallel in content) models; one which may be used as an inservice course or as an introductory course in a preservice degree and two models for preservice teacher education. Of these latter one is designed to suit a thematically-based programme, which is increasingly common, and one to suit a disciplinary programme, which has been the more traditional form of teacher education courses.

In the proposals for implementation of the curriculum it is not assumed that all countries or institutions have the resources to undertake a full implementation of one of the curriculum models in all institutions, and a set of modest proposals were presented which would enable each country or institution to participate in the promotion of equal opportunities in teacher education within

the limits of their own financial constraints.

The author was surprised and gratified when presenting the curriculum to the Working Party in Brussels to discover that a number of member states were anxious to implement a full programme of implementation, even where, as in Greece, the economic circumstances were difficult.

The weaknesses of the curriculum are in many ways the concomitants of its strengths, namely:

1. Lack of specificity and detail.
2. Insufficient direction to potential users of the curriculum as to the methods , time allocation and assessment procedures to be adopted.

Lack of detail

In its presentation of content headings, which some commentators on the curriculum have described as overwhelming, there is no spelling out of the sources of the content headings in the research literature. The curriculum therefore assumes a level of familiarity with the research base which matches that of the authors. As we know from Chapter 7, such a level of familiarity is at this time still relatively rare, and means that teacher educators would require to study widely before undertaking much of the work suggested in the curriculum .

2. Insufficient direction on methods, time allocation and assessment

In avoiding a prescriptive approach, the curriculum denies the potential user the benefit of a detailed presentation of didactic approaches and means of assessment which have been tried and tested and which are available in the writings of the ATEE group and in the Women's Studies literature on curriculum theory.

The range of issues to be dealt with in the curriculum is such that the time constraints of any teacher education inservice or preservice course would render it impossible to deal with them adequately and the curriculum does not indicate priorities which would assist one in making a decision on time allocation.

There is therefore a great deal of work to be done by the teacher educator in adapting, modifying, interpreting and implementing the curriculum in a manner likely to be effective in achieving the aims prescribed.

In the section which follows, the author presents a module for an in-service course for a specific target group of Irish teachers, namely Mathematics teachers in second-level mixed schools. It is a primary concern of the author to present equal opportunities issues in a supportive and non-confrontational manner and her experience over the years has proven the value of this approach. By giving responsibility and autonomy to teachers

for the analysis of their own practice and for the identification of gender issues in their own schools, they rather than the course tutor become the authorities on equal opportunities, and are enabled to develop professionally and personally even where their initial position was one of alienation or apathy.

Constraints in the design of an in-service module to implement equal opportunities.

As has been stressed in the preceding chapters of this thesis, Irish teacher education is characterised by declining demand for teachers caused by the twin factors of a falling population and government economic policy of cutbacks in public expenditure. Consequently, the supply of teachers from pre-service programmes is declining quite dramatically, with admissions to all teacher education colleges in 1988/89 reduced by at least 50 %.

A programme which is designed to promote social change, as has been the author's intention in designing the ATEE curriculum, must therefore place greater emphasis on in-service teacher education if it is to have any impact in the longer term since the majority of teachers who will be employed in the educational system over the next twenty years are already serving in schools and will not be joined by young teachers in any significant numbers over that period.

The second constraint in Irish terms is, as we have seen in the survey ireported in Chapter 6, that of the limited number of qualified personnel among professional teacher educators who are in a position to provide a course in equal opportunities for teachers. Consequently, any course which is offered must be capable of being offered by a small team and cannot therefore range too widely or ambitiously over the comprehensive subject matter identified in the ATEE curriculum.

A third constraint is the level of funding available for the in-service education of teachers in Ireland. The Report of the Committee on Inservice Education in 1984 proposed the establishment of a National Council for In-service Education, and pointed out that:

"The level of financial support from the State would have to increase substantially in the near future in order to enable the Council to provide adequately for the needs of the educational system"

(Committee on Inservice Education, 1984, p.44)

As an indication of the gap between the needs for inservice provision and the funds available, the Committee costed their proposals at IR#4,825,000 at a time (1983) when provision for inservice stood at IR#225,000.

The Report of the Committee on Inservice Education was never implemented and funding for inservice since that

time has not improved.

A fourth consideration in designing a course of teacher education in equal opportunities is the relatively unprogressive views and attitudes of Irish people (Commission of the European Communities, 1988) which are found inevitably among teachers also. Therefore, the approach adopted must strike a balance between promoting public policy on equal opportunities on the one hand and alienating individuals on the other. The course tutors must approach the topics in a non-confrontational manner, and must respect and support the participants while maintaining the intellectual integrity of the course.

While this seems an impossible task, the author's own experience of working with teachers and school principals on equal opportunities issues over the past eight years and the evidence of the evaluation questionnaires completed by the participants in those courses indicate that success is indeed possible.

A final consideration in the overall design of the course is that of the time available in relation to the achievement of worthwhile objectives. A full-length course of one-academic year's duration would permit teachers to develop high levels of knowledge and skills. This is an impossible goal in the context of Irish teacher education as funding for ^{such} courses is not available. As it would be very difficult to attract participants to unfunded courses, one is therefore obliged to seek financial sup-

port from the Department of Education in the form of travel and subsistence allowances for teachers. This has the added benefit of making the course proposed an "approved course" in official terms. Since in-service courses are rarely longer than one week, this would not be adequate time in which to enable teachers to engage in the practical tasks and applications which would facilitate transfer of learning to their professional context of the classroom and the school organisation. A constructive approach when faced with this dilemma is, therefore, to plan a modest course with official funding but to structure it in such a way that worthwhile goals can be achieved. Therefore, the course has been designed as a two-part programme, with attendance at tutor led sessions in a College of Education in two blocks of three days each, separated by at least one term's work in the school, in which the participants will have the opportunity to carry out a number of research or intervention activities. In this manner, the course will have an impact over three terms, while only being costed for six days' attendance.

This structure will enable teachers to design interventions and to analyse gender issues in their own professional environment, to analyse the outcomes and to discuss in the second block the significance of those findings. As outlined in Chapter 9, previous experience in the author's courses at Thomond College has established the greater efficacy of enabling the student teacher to become the analysts of their own practice. The greater

control and autonomy afforded by such a process minimises the threat to the teacher which analysis by an "expert" or external researcher or tutor frequently creates.

The professional work of a teacher is certainly a matter of knowledge; of cognition. The mastery of concepts, principles and generalisations within the field of competence of the teacher is therefore a central component of any teacher education curriculum. Teaching is however an interactive process between teacher and learner and therefore the process itself is the proper study of student teachers also. The curriculum must therefore deal with methods, didactics and pedagogical theories which serve to promote equal opportunities.

In addition to content and didactics, research on the teaching process indicates the importance of the teacher's own attitudes and gender identity in moulding their relationships with the girls and boys in their classes and in creating expectations among the pupils as to their future roles as men and women and as workers. Therefore the student teacher must be enabled to understand and deal with their own socialization through the activities and content of the curriculum.

In the broader context, both social and organisational, in which teaching and learning take place, the teacher must be an informed and critical participant of the place of gender in the workings of social and educational in-

stitutions. Such understandings must of necessity be historically based and include the range and diversity of cultural difference which any society contains.

The aims of the curriculum can thus be stated as follows:

1. The teacher shall demonstrate understanding of the concepts and principles appropriate to the promotion of equal opportunities in the classroom and in the school and in particular the data on participation, allocation and student choice in Mathematics, Science and Technology.
2. The teacher shall acquire a range of interaction skills which promote equal opportunities in the classroom.
3. The teacher shall engage in a process of exploration and exchange of experiences designed to promote personal growth and understanding of his/her own socialization.
4. The teacher shall demonstrate knowledge of gender inequality in historical and crosscultural perspective and in relation to other forms of inequality based on race, social class and ethnic origin: of gender and schooling and the functioning of inequality in the classroom, the school and the societal context of education; of the policies and actions which promote equal opportunities in

education.

The structure of the course is outlined below.

8.4. Course structure for an In-service Module

Block1 Term1	Classroom research Term2	Block 2 Term3
3 day course	Completion of	3 day course
Gender in the classroom	project	The School as an organisation. School and Society

BLOCK 1 TERM 1 OF ACADEMIC YEAR

Three days, six hours per day

Day 1 Session 1
Two Hours

Equal opportunities in the classroom

The objective of the first session would be to introduce the participants to the concept of gender as a socially constructed rather than an innate or biological phenomenon.

The first two sessions would comprise a task, followed by a lecture and discussion.

Task: Working in groups A and B :

A: from a list of personality characteristics identify those which are "masculine" "feminine"

B: from a list of personality characteristics, identify those which are significant for the successful study of mathematics.

Groups' findings are presented on flip chart, and predictably, masculine characteristics will be listed more frequently as suitable for the study of mathematics (e.g logical, rational, unemotional)

The objective of the task is not to arrive at a "right" answer, but rather to :

- a) create a group dynamic among participants
- b) to encourage active participation
- c) to "break the ice"

d) to focus the participants on the issues of gender, stereotyping and teacher attitudes in mathematics.

The tutor must maximise the opportunities for gentle humour and levity which such an exercise always provides and should stress the acceptability of all contributions to the discussion.

Time allowed: 45 minutes

LECTURE

- Biological determinism and the construction of "the feminine" and "the masculine"

- Intelligence, and aptitude ; sex-differences and similarities- language, mathematical ability, visual-spatial ability; deficit theories of sex-difference

- Behavioural differences and similarities; aggression and competition, dominance and submissiveness, conformity and deviance

- Differences and similarities in learning styles and cognitive approaches

- Cultural and historical variation in accepted notions of masculinity and femininity

Time limit: 40 minutes

DISCUSSION: 35 minutes

Day 1 Session 2

One hour

Motivating girls and boys in the classroom

Stimulus: Video interviews with pupils on their experience of schooling

Time allowed: 15 minutes

Lecture

-Pupils' self-image, self-awareness and educational self-confidence ; attribution of causes for success and failure in school work.

- Estimation of mathematical abilities by girls and boys

Time allowed: 30 Minutes

Discussion: 15 minutes

Day 1 Session 3

Two hours

Interaction in the classroom

Stimulus: video of classroom interaction in a mixed class

Time allowed 15 minutes

Task: list the types of interaction observed in the video: identify any incidents of interaction in which gender was a dynamic.

Time allowed 10 minutes

Discussion:

15 minutes

Lecture:

The importance of teacher's expectation of the future adult occupational and domestic roles of girls and boys

- Classroom behaviour of teachers as a consequence of gendered perceptions and expectations;
- Classroom interaction and management

Day 1 Session 4

Two hours

Introduction to classroom interaction skills

-Questioning, praise , criticism, instruction on task, classroom organisation , allocation and distribution of resources; differential rewards and negative sanctions for girls and boys

- Competitive and cooperative learning strategies in the mathematics classroom.

Time allowed: 45 minutes

Film and presentation demonstrating first set of skills
Redirection; Higher and Lower cognitive questions; Handling incorrect answers

30 minutes

Introduction to TIPAM (Thomond Interaction Process Analysis for Microteaching)⁷

Analysing and coding a microlesson

1 hour

7. TIPAM is an interaction analysis schedule developed by the author for her microteaching courses, and is discussed fully in Chapter 9.

Day 2 Session 1

Preparation of microlesson

One hour and 30 minutes

Day 2 Session 2

Mathematics textbooks

Lecture 30 minutes

- Textbooks as vehicles for the transmission of that knowledge which is deemed legitimate and public by society

- The representation of women and men in both pictures and text(not only numerically but also the manner in which they are represented and the values accorded to them)

- Language in texts

- The male as the norm for human experience, titles, occupational titles, the use of examples drawn from the experience of only one sex,

Task:

Preparation of non-sexist materials for microteaching

One hour

Day 2 Session 3

Recording of video lesson

One hour

Application of Tipam to lesson

one hour

Review of video lesson with tutor

One hour

Day 3 session 1

Preparation of reteach of lesson

One hour

Day 3 Session 2

Recording of reteach of video lesson

One hour

Application of Tipam

One hour

Day 3 Session 3

Review of microteaching reteach with tutor

One hour

Day 3 Session 4

The study of Mathematics

Two hours

Participation allocation and pupil choice of subjects

Mathematics, Science and Technology

Subject choice and subsequent labour force participation

Gender differences in performance on different types of test or examination

- Designing sex-fair assessments. Research on alternative approaches to the teaching of the subject which promote participation and attainment by both sexes e.g. the teaching of natural and physical sciences or the teaching of new information technologies.

Final session: allocation of classroom based projects on issues of classroom behaviour, e.g., questioning, praise, criticism, use of space and resources, teaching materials

BLOCK 2 TERM 3

The school as an organisation

Day 4 six hours

Presentation of research projects and discussion of findings

Day 5 Session 1

one hour and 30 minutes

The school as an organisation

Lecture and discussion one hour and thirty minutes

- Single sex and coeducation

- The aims of the school in relation to equal opportunities curriculum for girls and boys

- The hidden curriculum- social interaction in the school; norms for behaviour of girls and boys; discipline, deviance and delinquency

- School rules and organisation; rituals in school - school uniforms or dress codes

- Division of labour in classrooms and schools; male and female teachers as role models for pupils

Day 5 Session 2

one hour and 30 minutes

Lecture and discussion

-Differentiation in curriculum for girls and boys; provision , allocation and choice in Mathematics. Horizontal and vertical segregation ; streaming, setting and banding and the consequences for girls and boys

-The extent of provision of core and optional subjects for girls and boys

-Subject specialization or the liberal curriculum,i.e the extent to which boys and girls concentrate on subjects in particular areas such as science or business studies or choose across a wide range of subjects; the consequences of specialization for future career choices

- Allocation rules in schools based on previous levels of attainment; timetabling of options

-Pupils' true rates of choice; different participation rates for girls and boys where a subject is provided and allocated on the same basis; explanations for this phenomenon

Day 5 Session three

Three hours

Workshop and presentation

From a study of the workshop materials provided on careers, labour force statistics, CAO and EEA materials each group will prepare a presentation on one of the following themes.

- Entry qualifications for further education or entry to the labour market;
- The relationship between subject choice and subsequent career
- Investment in education by the individual and the returns in the form of earnings and social and occupational status
- Vocational and career guidance by teachers

Day 6 School and society.

Session 1 one hour and thirty minutes

Lecture and discussion

- The aims of education in society; explicit and implicit aims, variations across cultures and over time
- The production, selection and transmission of knowledge; women's and men's role in this process

- Invisibility and marginalisation of subordinate groups in the educational system to include race, class, religion, ethnic origin and gender

Day 6 Session 2

Two hours

Workshop Task:

To establish from among the members of the group a profile of men's and women's careers in teaching by examining the following issues:

- Women and men in the teaching profession; levels of responsibility and authority in education; career patterns and promotion; the feminisation of teaching
- Education and work; definitions of work, paid and unpaid, productive and reproductive, caring
- Horizontal segregation in the teaching force (by horizontal segregation is meant the clustering of women and men into different subject areas: by vertical segregation is meant the clustering of women and men into different levels or grades)
- Levels of earnings and the differential between the earnings of women and men

-The double burden (by which is meant that women teachers may also have responsibility for domestic work and child care)

-The correspondence between a gender differentiated education and a gender differentiated labour market

Day 6 Session three

one hour

Lecture and discussion:

- Strategies for promoting equity ; national and European Community

-National and European Community policies on equal opportunities in education, training and work; legislative frameworks

Final Session

One hour and 30 minutes

Plenary discussion:

Towards a plan for promoting equal opportunities in the mathematics classroom and in the school.

Resources for the course:

Essential texts:

On Mathematics, Science and Technology;

Whyld, J, 1983 Sexism in the Secondary Curriculum, London, Harper and Row

On participation and subject choice in mathematics in Irish Schools;

Hannan, Breen et al, 1983 Sex-roles and Schooling, Dublin ESRI

On classroom interaction skills and the analysis of gender in classrooms

Perrott, E, 1983, Effective Teaching, London, Longman

Additional resources for workshops, lectures and projects
Arranged according to the themes of the course;

Section 1 lists those which are centred on teaching itself, studies at the micro level of schools, classrooms and curriculum, many with an interactionist perspective. As Sara Delamont has observed, it is only in recent years that it has become respectable - even fashionable - for sociologists of education to conduct a major part of their research by the direct observation of life in classrooms.

The second section offers readings at the macro level where the education of women is analysed from a functional perspective in the context of broader social, economic and political forces and interests which are characteristically male. Affirmative action programmes and intervention strategies on behalf of women

in education are proposed or described in other readings listed.

Titles of general interest are included in a short selection of readings in the third section.

Section 1: Schools, classroom and curriculum

CLARRICOATES, Katherine, "The importance of being Ernest,...Emma...Tom...Jane: the perception and categorisation of gender conformity and gender deviation in primary schools" in Deem, R., (ed), Schooling for Women's Work, RKP, 1980. A study of four socially diverse British primary schools, in which the subordination of girls is maintained even though class based definitions of femininity vary.

DAVIES, Lynn, "Deadlier than the male? Girls' conformity and deviance in school", in Barton, Len and Meighan R (eds), Schools, Pupils and Deviance, Nafferton Books, Driffield, 1979

A mixed comprehensive school (U.K.) provides the setting for a theory of deviance to apply to girls as well as to boys both of whom write "personal scripts" - their responses to ambiguous status and their affirmation of identity.

DEEM, Rosemary, Women and Schooling, Routledge and Kegan Paul, London, 1978

DELAMONT, Sara, Sex Roles and the School, Methuen, 1980

Material is presented to show how gender differences do in fact permeate every facet of life in schools and colleges, and how these institutions and the content of what they teach actually serve to reinforce the gender differences pupils are already aware of rather than querying or challenging them.

DELAMONT, Sara, Interaction in the Classroom, 2nd ed., Methuen, London, 1983

DELAMONT Sara, Readings on Interaction in the Classroom, Methuen, London, 1984

EGGLESTON, John, "The Construction of Deviance in Schools",

in Barton, Len and Meighan, R., (eds), Schools, Pupils and Deviance, Nafferton, 1979.

By a variety of mechanisms and covert interactional processes, school organisation and staff combine to create "deviant" behaviour on the part of boys and girls.

EOC, "Gender and the Secondary School Curriculum" Equal Opportunities Commission Research Bulletin, No

6, Spring 1982

Available free from the Publicity Section, Equal Opportunities Commission, Overseas House, Quay Street, Manchester, M3 3HN

Includes a review by Alison Kelly on current research on different aspects of school curriculum and a paper by Judith Whyte and Barbara Smail on action research on girls' participation in science and craft. Useful statistical appendix.

FURLONG, Viv, "Interaction sets in the classroom: towards a study of pupil knowledge: in Hammersley, M and Woods, P., The Process of Schooling, Open University and RKP, 1976

INTO, "Equality in Primary Education", Tuarascail, Special Issue, No 9, 1983, INTO, Dublin

MAHONY, Pat, "Sexist Processes of Interaction in Mixed-sex Classrooms" Women's Studies International Forum, Vol. 6, No 1, 1983

JACKSON, P.W. and LAHADERNE, H.M. "Inequalities of Teacher-Pupil Contacts", in Morrison, A and McIntyre, D., The Social Psychology of Teaching, Penguin Books, 1972

A study of teacher pupil interaction in four primary

school classrooms(USA) in which boys receive a disproportionate amount of the teachers' instructional, managerial and prohibitive messages.

LOBBAN,Glenys,"The Influence of the School on Sex-role Stereotyping",in The Sex Role System, Chetwynd,J and Harnett,O.,(eds),Routledge and Kegan Paul, London, 1978

STANWORTH,Michelle,Gender and Schooling,Hutchinson, London, 1983

In coeducational classrooms of the humanities department of a college of further education (U.K.),girls are consistently devalued,marginalised and subjected to negative expectations of both teachers and boys.Intervention strategies urged.Concise and uncomplicated.

MARLAND.Michael,(ed),Sex Differences and Schooling,Heinemann Educational,London,1983

WHYLD,Janie,(ed) Sexism in the Secondary Curriculum Harper and Row,London,1983

Deals primarily with a broad range of subjects in the U.K. school curriculum as well as with interaction and school organisation.A very useful text for teachers.

Section 2:Macro-level Studies

APPLE, Michael, (ed) Cultural and Economic Reproduction in Education, RKP, 1982

Apple's own introductory paper places the education of women within the broader context of gender relations, the division of labour and capitalist modes of production.

BYRNE, Eileen, Women and Education, Tavistock, London, 1978

Examines education policies from pre-school to third level and includes a chapter on women and teaching.

DALE, Roger, et al (eds), Education and the State, Volume 2 Politics, Patriarchy and Practice, Falmer Press, Barcombe 1981

includes "Schooling and the Reproduction of Class and Gender Relations" by Madeleine MacDonald and "The Official Ideology of education for Girls" by Ann Marie Wolpe.

DEEM, Rosemary, Coeducation Reconsidered, Open University Press,
London, 1985

Offers a variety of perspectives on coeducation debate in the U.K. which are important in the light of developments in the Republic of Ireland.

DEEM,R., "State Policy and Ideology in the Education of Women 1944-1980", in Cosin,Ben and Hales,Margaret, Education Policy and Society,RKP,1983

EMPLOYMENT EQUALITY AGENCY,
Schooling and Sex-Roles: Agency commentary, and summary findings,EEA, Dublin 1983

A summary of the ESRI report listed below,which is essential reading for those who wish to understand the situation in Irish schools.

HANNAN,D,BREEN,R,MURRAY,B., WATSON.D., HARDIMAN,N.,
O'HIGGINS,K.,Schooling and Sex-roles: Sex differences in subject provision and student choice in Irish post-primary schools,ESRI Paper No.113,Dublin, 1983

IFAPLAN,Action Handbook:How to implement gender equality,
Commission of the European Communities, Brussels, November, 1985

Intended as a guide to good practice for primary and secondary teachers, counsellors, administrators, parents and teacher trainers.To be made available shortly by the Department of Education, Marlboro St.Dublin.

KELLY,GAIL and NIHLEN,ANN,"Schooling and the Reproduction of Patriarchy: unequal workloads, unequal rewards" in Apple,M Cultural and Economic Reproduction in Educa-

tion, RKP, 1982.

KUHN, Annette, and WOLPE, Annmarie (eds),
Feminism and Materialism: Women and Modes of Produc-
tion, Routledge and Kegan Paul, London, 1978
see Chapter 11 on Education and the Sexual Division
of Labour

OPEN UNIVERSITY, Class, Gender and Education, Block 4, Units
10 and 11 of Course 353, "Society, Education and the State"
Open University Press, 1981

A concise and readable exposition of issues en-
tailed in social and economic reproduction. Class and
sex bases of socialization processes in home and
school, curriculum and the structure of schooling all
combine to reproduce the power relations and divi-
sions of labour on which patriarchal economic sys-
tems depend for their maintenance of power.

PRATT, J., BLOOMFIELD, J., AND SEALE, CLIVE, Option Choice:
a question of equal opportunity, NFER-Nelson, 1984

Reports the findings of a study of subject choice in
a sample of secondary schools in Britain. Includes
sections on teachers' and pupils' attitudes and a
brief, useful guide to good practice for
schools. Should be read in conjunction with
Hannan and Breen (q.v.) Schooling and Sex-roles
for comparison with Irish data.

KELLY, Alison et al,

The Missing Half:Girls and Science Education

Manchester University Press, 1981

Section 3:General

ACKER, Sandra, "No-woman'sland:British sociology of Education -1960-1979", in Cosin, B and Hales, M., Education Policy and Society, RKP, 1983

A feminist critique of two decades of British sociology of education dominated, but limited, by gender-blind studies and masculine perspectives and controlled by masculine interests.

Harvard Educational Review "Women and Education" a special double issue, Volume 49, No 4, Nov 1979 and Volume 50, No 1, February, 1980.

MEGARRY, Jacqueline, ACKER, Sandra, et al (eds), World Yearbook of Education 1983/84 "Women and Education", Kogan Page, London, 1984.

Resources for Feminist Research, special double issue "Women and Education" Vol.XII, No 3, November 1983 and Volume XIII, No 1, March, 1984.

Ontario Institute for Studies in Education, 252, Bloor
St. West, Toronto, Ontario Canada, M5S 1V6
Essays, book reviews and excellent resource lists
with a Canadian focus.

EURYDICE, Dossier on Equal Opportunities for Girls and
Boys in School, Brussels, 1985

OAKLEY, Anne, Subject Women

MAHONY, Pat, "Silence is Woman's Glory: The Sexist Content
of Education", Women's Studies International Forum, Vol. 5
No. 5
1982

KELLY, G.P., and NICKLER, A.S., "Schooling and the
Reproduction of Patriarchy", in
Cultural and Economic Reproduction in Education: Es-
says on Class Ideology and the State,
APPLE, Michael, (ed), Routledge and Kegan
Paul, Boston, 1982

WALSH, Lorcan, "Images of Women in 19th Century Textbooks",
Irish Educational Studies, Vol 4 no 1, 1984, pp73-
87, ESAI, Dublin

ABEL,E and ABEL,E.K., The Signs Reader;Women,Gender and Scholarship,University of Chacago Press,1983

Presents a selection of the most influential essays published in Signs since 1975. Includes Evelyn Fox Keller's ↗

essay on "Feminism and Science " and "The Social Relations of the Sexes: Methodological Implications of Women's History" by Joan Kelly-Gadol.

SHERMAN, Julia A.,and TORTON BECK,Evelyn,(eds),
The Prism of Sex: Essays in the Sociology of Knowledge, University of Wisconson Press,1977

9. Chapter 9 INTERVENTIONS IN TEACHER EDUCATION
Thomond College :a case study

In contrast to the last chapter which presented the ATEE curriculum and a model for an inservice course as designs for equal opportunities in teacher education, this chapter examines curricula which have been implemented over the last five years by the author at Thomond College of Education.

9.1. Thomond College of Education

TCE is the national centre for the education of teachers of specialist subjects for second level schools. Established first in 1973 it became a statutory body under the Oireachtas, the Thomond Bill in 1980. The present student body numbers 650, but will contract sharply over the next few years as reductions in intake take effect.

Currently on offer at Thomond College of Education are four undergraduate programmes leading to the following NCEA awards:

BA (for students specialising in Physical Education)
B.Tech. (Ed.) for students of Woodwork and Building Technology and of Metalwork and Engineering
B.Sc. for students for General and Rural Science

One post-graduate Diploma in Education (Business) is also available.

Postgraduate research students are currently registered and a number of Masters degree programmes and diplomas in Education are also offered .

Thomond College of Education has a statutory function in relation to inservice education for teachers, and the School of Post graduate and Professional Studies has to date provided courses for teachers in a wide variety of areas from courses in school management for Principals to courses in teaching skills. The author has contributed to six management courses to date, offering lectures and workshops on gender issues.

Undergraduate courses

With a focus on Women's Studies, autonomous courses on gender issues have formed part of the course of studies in education in the final year of all 4 undergraduate programmes from 1976-1980 Women and Education and from 1981 to the present, Gender and Schooling

This course has been assessed on final B.A., B.Sc., B.Tech papers, and is a 10-week (one term) course.

Tutor : D Ni Charthaigh.

Accompanying the development of an autonomous Women's Studies course on Gender and Schooling have been developments in mainstream education courses.

These include:

Microteaching

Educational Technology

Design of Teaching and Learning Resources

Sociology

Microteaching is a College based programme of skills acquisition in the area of classroom interaction. The course currently emphasises the twin themes of Equity and Excellence in classroom Interactions.

Students (182 in the academic year 1987-88) in all programmes follow a structured programme of skills acquisition in both classroom performance and analysis. Pupils from local schools attend for classes and videotaped recordings are analysed using TIPAM, an interactional analysis schedule described in the next section of this chapter.

Over 30 academic staff from a variety of disciplines have participated as tutors in the programme.

Educational Technology. Year 3
Design of Learning Resources Year 1.

The issue of stereotyping in print and audio-visual resources is dealt with in both these courses.

Sociology.

In Sociology, gender and social class provide focal points for the study of the sociology of the classroom (Years 1 and 2); the sociology of the school (year 3) and school and society (Year 4). The author collaborates with Mr. Pat Duffy and Mr. R.G. Harrison in presenting the lectures and leading seminars in these courses. Particular attention is given to research on gender in classroom interaction, on co-education, and on the reproduction of gender relations in society.

9.2. TIPAM: an Interaction Analysis Schedule for Microteaching

The Thomond Interaction Process Analysis for Microteaching (TIPAM) was designed as an analysis scheme for the teaching behaviour/performance of first year student teachers in the microteaching course developed by the author.⁸ The microteaching course is taken during the

8. The pilot-testing and evaluation of TIPAM were carried out by Ms. Fiona Mooney, Research Assistant under the direction of the author and Mr R.G. Harrison.

first and second terms of the students' course. Classroom interaction analysis at this stage of the students' undergraduate careers is primarily introduced as an attempt to further the training of student teachers. That is to say it is not used in a research mode, but in a training mode. So it is, that TIPAM was developed with the microteaching course in mind. If certain skills and procedures were to be mastered by students, a relevant interaction analysis schedule would be one which would provide students with feedback about their use of these skills and procedures. The issue of equal opportunities has a special place in the microteaching course and TIPAM has been specifically designed with this in mind.[†]

Prior to discussing the kinds of skills highlighted in the microteaching course, it is useful to consider any assumptions implicit in the course. One of them, which had implications for the analysis model, is that a teacher-directed classroom situation is assumed. The teacher, having established objectives for the lesson, conducts the lesson to facilitate achievement of these predetermined objectives. Also, the teacher having, say, asked a question, then calls on a pupil to answer, teacher responds and if appropriate, then redirects the question to somebody else.

[†] The author acknowledges the contributions of previous researchers, particularly N A Flanders, working in this field.

9.3. The Role of Microteaching in the Design of TIPAM

The content of the course is divided into two main sections; lesson presentation skills and questioning skills. The lesson presentation skills, such as stimulus variety and its role in a lesson, closure and its role, are not interaction and have no input to TIPAM. The questioning skills, however, are included in it.

There is a distinction made between those questions calling for recall or comprehension responses from pupils and those questions which involve pupils in mental operations of a more complex nature, for example, analysis and evaluation. We named the categories "higher (cognitive) level" and "lower (cognitive) level", holding no exclusive value on one over the other, in appreciation of the fact that cognition of knowledge/data necessarily precedes its development by learners. The student teacher's attention is drawn to the need for appropriately timed questions of both types. The use of "higher" level questions is encouraged since they challenge pupils intellectual and verbal capacities more than do "lower" level questions.

Student teachers' incorporation of this element of the lesson planning, then, is an element of TIPAM. "H" codes a higher cognitive question from the teacher and "L" codes a teacher's lower cognitive question. A further aspect of the questioning skills taught in the

microteaching course relates to the matter of distribution of the teacher's attention among the pupil group. The first of two elements relevant here is that students are helped to plan questions which call for not single fact answers but instead which call for sets of related facts. The intention is that pupil participation is generally increased when the skilled formulation of 'set of related facts' questions is coupled with the classroom technique of redirection. Redirection refers to the procedure whereby the same question is asked of many pupils, cutting down on teacher talk, increasing pupil participation and getting better distribution of interaction in the class.

TIPAM addresses itself to those elements of the microteaching programme implicitly. TIPAM records each interaction which occurs in terms of its content, intention and internal sequence. TIPAM tells us, graphically, about the distribution of interaction in the class and while not specifically recording incidents of redirecting by the student teachers, it does record the overall interaction distribution. Students using TIPAM to analyse their teaching are required to interpret the findings and may, in the light of TIPAM and their tapes, realise connections, if present, between many interaction entries and little lecturing time with a teacher's ability to ask questions conducive to being redirected.

The sexes of pupils is recorded in the TIPAM scheme. This takes cognisance of the numerous research findings

that in learning groups comprised of boys and girls the pupil's gender is a determinant of the quantity and quality of teacher attention received: boys get the most and they get more of certain kinds. TIPAM indicates whether pupils are boys or girls and, showing distribution of interaction, it will show the distribution between boys and girls. Again, TIPAM findings will have to be accounted for by the students.

A further emphasis of the microteaching course is that of encouraging probing on the part of the teachers so that interactions with pupils become more involved, and become less superficial. Responses from pupils/learners are frequently and especially initially, inadequate. A child may be shy; his/her first utterance may not be intended as "the answer", it may simply indicate that the child can and would answer this. The child's remark may, as it were, be a 'feeler'. Helpful, sympathetic probing will elicit the full response: the snail will be coaxed out of the shell. Ambiguous, unclear, seemingly incorrect, irrelevant responses can be clarified or corrected if the teacher follows up on the pupil's response.

TIPAM, by recording consecutive interaction with one pupil can show whether it is of a protracted nature or not. Three item entries e.g. ↓H↑↓✓ (where ↑ is a pupils response and ↓✓ is teacher acceptance of it) would indicate that no subsequent questions had been asked of this student. There may have been no need:

students have to assess the findings, using the tapes to decide whether the interaction recorded in TIPAM was used to good effect or not, in the lesson.

In TIPAM, teacher questions which receive no response from a pupil are coded by circling the unanswered question i.e. $\downarrow H$ or $\downarrow L$. Clearly, if one of these entries is not followed by another teacher arrow(question), it will indicate that in this instance, no probing or prompting took place. In the recording system of TIPAM, the end of an interaction sequence with a pupil is coded by underlining the consecutive items with the pupil e.g. the reject of an answer to a question followed by another question, the response to which is accepted and praised, would look like this:

$\downarrow L \uparrow \downarrow x \downarrow L \uparrow \downarrow +$

In addition to the above questioning skills and techniques and planning elements important in the microteaching course, there is also the question of the extent to which the student teacher manages to direct the classroom events. A failure to address questions to specific pupils allows pupils to dictate the distribution of classroom interaction: the quickest, most confident or even loudest pupils will answer as often as they can. More reticent pupils will be unable for or uninterested in the competition to contribute. It could happen that one or a few pupils 'monopolise' the inter-

action. A chaotic microteaching lesson may develop from the clamour of pupils for the teacher's attention. TIPAM can record instances of questions which are phrased but not addressed to any pupil in particular. TIPAM can record instances where pupil's response is in the form of a group chorus - i.e. all are answering together but no pupil is pre-dominant. In a sub section of TIPAM, these group directed questions and chorus responses are noted. In cases where a pupil answers a question without having been called on, his/her response is entered in a section of that pupils area on the interaction analysis schedule (i.e. the right hand margin). Subsequent teacher responses are recorded next to the pupil's, in the usual manner.

Summary

The above is an account of the genesis of TIPAM. It is a description of how the elements of the microteaching course were taken into account and built-in to TIPAM's design. Every attempt was made to maximize the potential of an interaction analysis schedule both as an instrument of training and as a source of evidence for the student's analysis of their teaching. The simplicity and specificity of TIPAM resulted from these considerations.

TIPAM CODES

The TIPAM interaction analysis schedule is made (see appendix F) up of ten kinds of interaction events which could occur in the classroom. Four refer to teacher questions (↓H, ↓L, (↓H), (↓L). Only one code exists for pupil to teacher interaction (↑). There are codes for teacher acceptance and rejection of pupil answers/contributions. Acceptance or rejection can be achieved by teachers in very subtle ways. She/he may say nothing. His/her gestures may speak volumes. Consider the difference between having an answer received by a raised eyebrow and by two raised eyebrows. The former, accompanied by no smile would indicate rejection most probably and the latter might be less final, less definite, and if prolonged by the teacher, the gesture may have the intention of a further question to the pupil ("What? Tell us more!").

A teacher, say, asks a pupil 'Why are carpets generally not put in kitchens?' The pupil answers 'crumbs!'. The teacher repeats 'crumbs?' This is an example of a classroom message whose intention must be interpreted for recording using TIPAM. The students who complete TIPAM from viewing their tapes must be aware of the tone of the classroom interaction, since many messages from teachers will not fall obviously into the TIPAM system : they may depend on the context in which they occurred.

This is also true for the codes of negative sanctioning and positive reinforcement by the teachers. Teachers may sanction negatively with a glare, a stare, a frown. The vocabulary of para language is large. Similarly a

teacher's non-verbal reaction to a student's contribution may be strong enough to merit not the code of acceptance (as in a nod of the head) but positive reinforcement (as in a smile to the pupil).

Even in the matter of teacher questioning, the TIPAM system takes context into account, so that not only does non-verbal significant communication figure in TIPAM, but also subtitles of time. For example, questions asked without a subsequent pause for an answer - rhetorical questions - are not recorded as 'questions' but as teacher (lecturing) talk. Questions are not recorded as being directed at a specific pupil or otherwise, until, from the tapes, some following interaction occurs. The intention of the messages is considered, their purpose, their consecutive occurrence and their conclusion.

Mention must also be made of the design of TIPAM in regard to providing information about how much time the student teachers spend interacting with pupils and how much time they spend 'lecturing'. By 'lecturing' is meant teacher statements which relate to the content, the subject matter of the lesson. Included in this category would be teacher expansion of pupil responses, when the teacher's input has clearly gone further than being 'acceptance' of the answer.

Included would be descriptions, explanations, opinions addressed by the teacher to the class. Excluded from

'lecturing time' would be time pupils spend answering or contributing, time when teacher is asking a question of the group or of a pupil, time teacher spends giving instructions or directions to the class about what is expected of them. The latter is coded 'managerial message' in TIPAM (↓ M) and these can be addressed to individual pupils or to the class group.

TIPAM, then, can give information about how much time the student teachers spend lecturing and this throws more light on the elements of interaction which TIPAM records. We know what interaction took place and we also know how much time it took place in (i.e. duration of lesson minus lecturing time). This timing element of TIPAM can assist the students in their analysis of their TIPAM findings.

Results

i) Information which TIPAM has supplied about the teaching performance of the students.

In regard to distribution of teachers' questions it was found that, when the relative numbers of boys and girls were controlled for in the calculations, that the boys were asked a higher proportion of questions than their numbers warranted. This is especially true for the teach 1 cycle and second teach 2. Imbalances in the distribution of interaction seem to be especially pronounced

when the seating arrangements (without exception chosen by the pupils) involved a row of boys and a row of girls. If, early in the lessons, a pattern of concentration on the boys was established, the students later in the lessons were even physically tending to ignore the girls' row - by not facing the group but turning instead, slightly, towards the boys. As a result of this (girls being asked less frequently than boys), they were obviously asked fewer higher cognitive questions than were boys. There doesn't seem to be evidence of any particular mechanism by which the girls are given less attention. TIPAM does not, for example, indicate that at special stages in the lessons, more of one kind of questions than the other is asked. So that it doesn't appear to be the case that failure to answer, say, a lower cognitive question by a girl militates against her being asked higher cognitive questions at a later stage. What TIPAM does, however, suggest, is that failure on the part of a girl to answer any question decreases her chances of being asked again, to a greater extent than a boy's failure to answer decreases his chances of being asked again. TIPAM shows that 'boxes' of students containing entries of unanswered questions tend to be relatively empty but this is true more so for girls than it is for boys.

The TIPAM findings so far do not allow any conclusions to be drawn as to whether or not the sex of the teachers is related to certain patterns of interaction distribution. (This is because the majority of teachers for whom TIPAM

was completed were males).

When teachers asked questions of the group of pupils, the boys did most of the answering so that the imbalance in distribution is most pronounced in lessons during which the teachers failed to specify pupils they wanted to answer.

In regard to whether students are building both higher and lower cognitive questions into their lessons, it must be said that there is TIPAM evidence that lower cognitive questions are tending to dominate - and throughout the (42 minute) lesson. (This is often the result of bad group planning : the students' lessons (7 mins) are not part of a coherent whole, each student does not develop the previous lesson, rather she/he introduces a new section. This allows little scope for progression to higher cognitive questioning, since the basic knowledge keeps having to be dealt with by each teacher).

For cycle 1 of microteaching, the TIPAM schedules are in the main part composed of three item entries : question, response and acceptance. There is also a considerable number of entries, standing alone, indicating unanswered questions. The cycle 2 TIPAM evidence does indicate that probing is being attempted by students; the 'consecutive interaction' underlines are getting longer. There are fewer unchallenged failures to respond by pupil, also.

There is a considerable absence of praise and encouragement from teachers in the microteaching classrooms. Very few items of positive reinforcement are recorded - in the majority of lessons none at all.

The students, perhaps influenced by TIPAM, are tending to given directions to pupils in the reteach 2 lessons whereas they had not given instructions in cycle one - especially in relation to expectations about their procedure for answering questions.

There is also considerable change in regard to the questioning that the students used in reteach 2 as compared with teach 2.

(ii) What were student's perceptions of TIPAM?

TIPAM was designed for a particular purpose. It was necessary to evaluate the extent to which it achieved the objectives established. Does it succeed in providing feedback about the questioning skills of the teacher; whether his/her questions were challenging; whether pupils' answers were given a response and whether the questions were distributed equitably among all the pupils.

The answers to these questions hinged on whether or not the students - the users of TIPAM, found it to have been useful in these respects. Do they feel more keenly

aware of their teaching performance due to the TIPAM self analysis? Does it tell them what they were interested in knowing? The results of a questionnaire to students would indicate that it did. (Appendix G)

Table 25. Student response to the statement "TIPAM provided useful information about my teaching".

	% Disagreed/ Disagreed strongly		% Agreed/ Agreed strongly	
	Males	Females	Males	Females
Programme:				
Rural Science	7	30	92	69
Physical Ed	28	20	70	76
Metalwork	16	-	83	-
Woodwork	16	-	82	-

The visual nature of TIPAM schedules, the clear, graphic description of the kinds of things which happened during lessons, was received positively by students. There emerged what became called 'a favourable TIPAM' - one in which extended interactions, peppered with '↓ H' entries, were spread over all pupil boxes fairly! TIPAM gave students something to work on for the next lesson:

include all pupils, give more praise, ask better questions, ask good questions of all the pupils. The most obvious and a very worthwhile result of TIPAM was this focusing effect it seemed to have. There was a strong sense of intention in the teaching of the students final lesson. They seemed to be more deliberate in their input to the classroom interaction : they wanted a favourable TIPAM.

Many students expressed the opinion that had TIPAM been introduced earlier in their microteaching course, their performance would have been more focused earlier and perhaps, as a result, better earlier.

In the questionnaire to students, mentioned above, two other items related to TIPAM. Student response to the statements "I found TIPAM easy to understand" and "I found TIPAM easy to apply to my video recordings" is shown in Tables 26 and 27.

The ease with which students could comprehend the analysis system was greater than the ease they experienced applying it. It is, however, likely that the apparent difficulty of application reflects not so much inherent difficulty as time and space trouble due to a last week rush on facilities. Next year's microteaching groups need, however, to be instructed on how to record entries on TIPAM efficiently by using the pause tape function very frequently, and at the right times.

Table 26. Student response to the statement "I found TIPAM easy to understand".

	% Disagreed/ Disagreed strongly		% Agreed/ Agreed strongly	
	Males	Females	Males	Females
Programme:				
Rural Science	46	30	53	68
Physical Ed	49	12	49	88
Metalwork	34	-	67	-
Woodwork	30	-	67	-

Table 27. Student response to statement "I found TIPAM easy to apply to my video-recordings".

	% Disagreed/ Disagreed strongly		% Agreed/ Agreed strongly	
	Males	Females	Males	Females
Programme:				
Rural Science	46	30	53	69
Physical Ed	36	56	42	60
Metalwork	58	-	40	-
Woodwork	4-	-	57	-

It must be said that a disappointing feature of the "pilot " test was the lack of use made by students of quantifiable evidence in their written discussion of TIPAM's for lessons they taught.

This was particularly true in the area of equity between boys and girls - students, in comments about their TIPAM schedules, failed to take into account relative numbers of boys to girls. Modifications of the course materials, however, will ensure that, next year, students will discuss findings not only in a qualitative fashion, but also by quantifying their impressions.

It has been suggested that TIPAM was well received by the student teachers for whom it was designed and it has been suggested also that it succeeded in achieving the purposes for which it was designed. Some of the following comments, taken from the handbooks submitted by students will further point to TIPAM's usefulness as a teacher training instrument.

Tommy Thornton

"The TIPAM analysis makes you very aware of the interactions in the classroom". "There was an obvious lack of higher cognitive questions in my lesson".

Arthur O Sullivan

"On analysing my tape of teach 2, I found an imbalance in the questions asked to the girls. I did attempt to redress this imbalance in reteach 2 but this didn't really show on the TIPAM". "TIPAM makes you aware of the need for properly structured questions".

John Willis

"I found that the TIPAM project indicated very clearly the way in which I distributed questions among the class between the boys and girls and the quality of such questions, i.e. higher or lower order".

Michael Sexton

"The TIPAM results have shown me to keep in mind that questions and attention must be distributed fairly among boys and girls".

Pat Moloney

"I asked more higher cognitive questions and distributed the questions evenly between boys and girls".
(Comparing 2 lessons).

Robert Lehane

"On looking at TIPAM, I found that in Teach 2 I seemed to neglect the girls who were sitting to my left...."

Justin McCarthy

"I found questions in reteach 2 were divided evenly amongst boys and girls but in teach 2, girls were asked a greater proportion of questions". "On filling in TIPAM, I noticed I have not made use of prompting when the required answer was not achieved".

Valerie Martin

"The analysis mostly helped me with my questioning skills. Now I am aware of the need to direct questions individually to pupils. I also share out boy/girl interactions better. I also recognise the need to include more higher cognitive questions".

Robert Nolan

"The TIPAM analysis is an excellent means of assessing teaching skills, it is clear and precise enough to allow the teacher to locate failings and also identify any good points". "The TIPAM analysis does provide an accurate evaluation of skills but only hints at any other failings which may occur".

Noel O Donnell

"I have a preference for asking the boys a higher percentage of the questions and most of them are higher cognitive".

Eoin Marren

"Overall TIPAM was excellent as I knew exactly what I was looking for in the lesson and therefore could analyse it in stages rather than all at once. It increased my awareness when preparing and actually giving the lesson".

Hugh Rudden

"Through the TIPAM, I have found that I do not ask the girls as many questions as the boys. I concentrated on the boys. I saw that I had a lot of lower cognitive questions. I could see in teach 2 I used a lot of prompting and consecutive interaction".

Mairtin O Mainin

"I could maybe spread the higher cognitive questions around the pupils a little more and I don't know whether it was a coincidence that I tended to ask a much higher percentage of questions of the boys".

(iii) Tutors' view

Tutors' perceptions of TIPAM's effect on the students' performance : an overview to date.

If it were the case that TIPAM was not seen by tutors to have an effect on the students teaching, then it could not be said to have been successful, given that it was designed as a teacher training instrument.

Happily, however, the feedback from tutors has all been positive. The TIPAM system is found to be sensitising the students to the demands of the course and highlighting the relevant aspects of their teaching performance. The heightened sensitivity has, at least for the students which the author has seen teach in reteach 2, tended to transfer into better and more use of the skills being learned in the microteaching course.

Modifications to TIPAM

In the light of the analysis above, the Microteaching course has been modified for the academic year 1988/89 and will again be evaluated to determine whether the changes have met with student's needs. The most significant changes are in the wording and presentation of the 65 page booklet which the author has produced to accompany the course and in the introduction of TIPAM at an earlier stage of the course.

**10. CHAPTER 10 ACTION RESEARCH ON THE INTEGRATION OF
EQUAL OPPORTUNITIES IN TEACHER EDUCATION**

10.1. Methodological issues in research on gender

In approaching the task of developing a curriculum framework the standing working group on equal opportunities of the Association for Teacher Education in Europe has taken the view that a more radical examination of curriculum and teaching is required and that the provision of an additional course on equal opportunities will do little to change the features of education which disadvantage women.¹

This perspective constitutes then the first of the issues to be faced in the design of a research programme : namely, the value positions of the participants in the research.

1.

This chapter has been previously published as "Action Research on the inclusion of equal opportunities in the curriculum of teacher education in a number of European countries: some methodological issues", Ni Charthaigh, D., 1987, in Research on Education and Teacher Training, Privat, Toulouse.

Most, perhaps all of the group would describe themselves as feminists, and have therefore a declared position on the question of equal opportunities and gender issues. This will not necessarily be the position of those with whom any action research would be conducted.

Secondly, a research programme committed to the improvement of practice, which for feminist researchers must mean the improvement in the status of women (Mies, 1983) will be seen by some academics as an interference with their traditional autonomy and a contradiction of conventionally understood academic freedoms. This view might reasonably be held by both pro- and anti-feminist teacher educators, but where the problem of resistance to the ideology of feminism is strong, may be used to undermine the research project.

A third issue, and one which relates closely to the last point, is that gender equity is not seen as a matter of "immediate concern" to many teacher educators, and they will therefore feel that it is an unwarranted waste of their valuable time. This will be particularly the case in those countries, like Ireland, where consciousness of the issue is low and there is an absence of equity legislation in the field of education. In Ireland, this problem is aggravated by the consensus ideology within education whereby there is an assumed level of agreement on what constitute the aims and proper concerns of education. In documenting this phenomenon Lynch (1987)

shows how issues of class, race and gender are represented merely as attributes of individuals rather than as dynamic social forces. Consequently, gender is not seen as an important issue in education. This consensualism is coupled with beliefs in meritocratic individualism, that is the view that the individual achieves on the basis of abilities and interests within an education system which offers equal access and equal provision. The fact that class, race and gender are major determinants of the level of an individual's educational attainment is given very little attention in the literature of education.

The fourth problem to be considered in the design of a research or curriculum development project is the cultural variation between member states. In the case of gender issues, the variations between states as to the status of women in both public and private life are quite significant. Developing curricula which have a commonly applicable base in social practice is therefore very difficult. To give one illustration, women represent only 26% of the unemployed in Ireland but 57% in Denmark. (Not, as it might appear, an indication that things are better for women in Ireland, but rather a reflection of the very low labour force participation of women in Ireland and the definitions of unemployment used which exclude large numbers of women from the statistics).

Aspects of curriculum that deal with labour force participation and vocational choice will consequently take

on a very different emphasis in the two countries.

We are more than familiar in ATEE with the difficulties of communication on educational matters when the structure and practice in education vary from country to country. The problems of nomenclature add further to these difficulties: one has only to think of the problem of the anglophone in coping with the term "formation professionel" to realise this. The term "gender" as applied to the socially acquired behaviour of masculinity and femininity causes corresponding difficulties for francophones for whom it is still a grammatical designation.

At all these levels therefore, the structure and practice of education, the social status of women and men, and the linguistic construction of reality, the task of conducting action research across member states is made complex. The task then is to identify the features of a methodology which can deal with these complexities.

It is the author's contention that the characteristics of feminist research within Women's Studies and Action Research are similar and offer the best approach to tackling the problems identified.

10.2. Feminism and research

Much of the work of feminist scholars derives from the

view that knowledge is a socially constructed artefact, i.e., that knowledge and the means used to produce that knowledge, (e.g. research methodologies) are products of particular social circumstances and reflect the dominant ideologies of a time or place. That patriarchy is a feature of the dominant ideologies of European countries is well documented and Women's Studies scholars have developed critiques of conventional research methods as reflecting male dominance, (Bowles and Duelli Klein, 1983).

The particular target for feminist critiques has been the logical positivist tradition applied to social sciences, which, until recently, was the dominant mode of educational research.

The following table will summarise the points of comparison which can be made between the two approaches.

Rational	A combination of rational and intuitive
Scientific	Accurate, eclectic
Structure oriented	Process oriented

Conventional	Feminist
Impersonal, detached	Personal, involved
Declared objectivity	Declared subjectivity
Male-as-norm	Female perspective on total human experience
Oriented to prediction and control	Oriented to understanding
Interested in validity, predictability replicability, generalisable principles	Interested in meaningfulness, usefulness specific explanations
Efficient, capable of completed analyses	Complex in application and limited to partial analyses

Many of the readers will see that these two idealised types of approach can be characterised as agentic and communal, (Reinharz,1983)¹ and indeed among the characteristics of the agentic are masculinity, while communal tendencies are labelled as feminine. Another feature of the approaches is their correspondence to Bernstein's Classifications of collection and integration codes which, it is argued, represent patriarchal and feminist contrasts in curriculum and pedagogy, (Ni Charthaigh,1985).

One may also be struck by the similarity between what has been characterised as feminist research and action research, and indeed it can be argued that the social conditions which have led to the re-emergence of feminism in the late 60's are the same conditions which have led to a rejection or re-evaluation of conventional educational research and the growth in action-research.

10.3. Characteristics of Action-Research

"What counts as research, what defines research method, is

1. The terms "agentic" and "communal" derive from the work of Paul Bakan, The Duality of Existence, Chicago, Rand Mc Nally, 1966. "Agency " and Communion" are seen as the two basic tendencies of human existence; the former involving separation of subject and object, control and ordering; the latter involves fusion, expression and non-linear patterning.

detached rationality. What characterises action is precisely the opposite: emotional involvement" (Chisholm, 1984, p.3)

Action-research can be said to :

1 be concerned with the improvement of practice as well as the development of personal understanding

2 involve participants in a collaborative effort of researching a problem of immediate concern to them and is conducted in situ using the whole population of the institution.

3 permit a reassessment of the research problem as the project develops and involve participants in evaluative reflection on the process and outcomes.

4 employ methods that are both scientific and innovative and be not rigidly tied to one preferred method.

(derived from McKernan, 1985)

While feminism is more concerned with social change than the mere improvement of practice, the description tallies in other respects and suggests that a methodology for action-research would accord with feminist principles. The following is an attempt to identify the out-

line of such a methodology.

A feminist or action-research mode is set in opposition to conventional research. It should be noted that polarising two forms of research in this manner is done in the interests of clarifying, and in reality no clear polarisation of "ideal" types exists

Some features of a feminist/action research methodology
contrasted with conventional research

	Conventional research	Action- research/ Feminist research
Research objectives	Testing hypotheses	Development of understanding through grounded concepts and descriptions.
	Formulation of generalisable theory	Improvement of practice
Topic of study	Manageable issue	Socially

	derived from the scholarly literature, sometimes socially significant	significant problem, sometimes related to issues in the scholarly literature
Methods	A priori, decided at design stage.	Determined by unique characteris- tics of field setting.
Relationship of researchers to subjects	Detached	Involved, shared
Validity criteria	Proof, evidence statistical significance, replicability.	Completeness, plausibility, responsiveness to subjects' experience.
Role of theory	Crucial determinant of research design.	Emerges from research implementation.
Data analysis	Summative use of statistical techniques.	Formative, creation meaningful patterns.

(derived from Reinharz, 1983)

10.4. Conclusion

Four problems were identified earlier:

1. The value positions of participants in the research or curriculum development on equal opportunities in teacher education.

The outline methodology cannot hope to resolve fundamental conflicts in values, but can at least make the examination of value positions part of the research process whereby participants can clarify and develop understanding of their own and other's value positions.

2. The perceived threat to academic autonomy.

Control of the research process is equally shared in the model outlined, and does not rest solely in the hands of the research designers as in a conventional model. The participants are subjects rather than objects of the research which is genuinely collaborative. While action-research cannot and should not be atheoretical, a priori concepts are open to discussion and subject to change in an evolving process. Potentially therefore, action-research can minimise the threat posed to academic autonomy by conventional methods.

3. The perception that gender equity is not an issue of

immediate concern to teacher educators.

In a feminist approach, this perception becomes itself part of the research, a valid area for exploration. The process can itself become one of conscientization, but here again, the balance between individual freedoms and public responsibilities is a sensitive issue and ultimately will be decided by the value positions of the individuals involved and by the legitimacy accorded to the issue of gender equity within the educational and social structures.

4. Cultural variations between member states of the European Community.

By avoiding a tightly structured and rigidly imposed model of "good practice", and by preferring a series of smaller scale initiatives within institutions, it is possible that a great variety of models of practice will emerge which respect not only national variations but also local and institutional conditions. The untidiness of such arrangements and the possibility for widely varying standards of equity in practice may be outweighed by the willingness of participants to implement a curriculum which is responsive to their own experience.

10.5. Proposal for an action-research programme

Following on the outline of the methodological issues

which the implementation of the curriculum entails, this section specifies a programme of action for Irish teacher education colleges based on those principles.

The action-research proposed would be a two-year programme of small-scale initiatives in teacher education institutions at all levels which, cumulatively, would have the effect of implementing the curriculum on a large scale.

Structure and funding

The following structure is proposed as a means of facilitating the action-research:

National Co-Ordinator, from within the Ministry of Education (this would ensure that funding available from within the Ministry through its committee on equal opportunities in education, already referred to in chapter 6, would be made readily available to this project)

Responsibilities:

Provision of guidelines, allocation of funds to individual projects, formation of a steering group representing all projects, information and publicity, convening of meetings of steering group and administration of project. Evaluation of projects. Dissemination of findings, curricular materials, and course designs.

Adviser

Professional teacher educator with research expertise to advise National Co-Ordinator on selection of projects, and on methodology and evaluation.

Steering Group

Comprising National Co-Ordinator, Adviser, Project Leaders from each of the institutions participating in the action-research.

Meetings should provide information, guidance on methodology, content and evaluation, both formative and summative, and should be a supportive network for the participants.

Aim of projects

The projects will have as their goal the promotion of equal opportunities for girls and boys in education through the implementation of an equal opportunities curriculum in the training of teachers. A copy of *Equal Opportunities for Girls and Boys: A Curriculum framework for Teacher Education with Guidelines for Action* by Arnesen and Ni Charthaigh should accompany the guidelines provided to potential participants and should be taken as a basic reference point in presenting the project proposal.

Headings for project proposal

The proposals should be presented under the following headings:

1.Aims and rationale

2.Resourcing,including personnel

Proposals should identify a project leader. Where the proposed structure of the project team is collective , one person should be identified as project director for the purposes of liaison with the National Co-Ordinator and participation in the meetings of the Steering Group.

3.Methodology

4.Content

5.Timetable for implementation and evaluation

Institutions or organisations may propose more than one project, though only in exceptional cases would more than one project be approved from a single institution.

Methodology

Each project should conform to the action-research model, described in the preceding section of this chapter, therefore the research should not be limited to identifying and analysing issues, but must also be concerned with action and development.

Applicability to other institutions

The projects should be such as to contribute to the implementation on a wider scale by other teacher educators in a dissemination phase following the action-research project.

Content of project proposals:

The following are suggestions only as to the nature of acceptable project proposals. Other proposals in keeping with the overall aims of the project should also be sought by the National Co-Ordinator.

Design and implementation of general educational theory and practice courses in Inservice and in Preservice programmes (Pedagogy and Didactics, Curriculum Theory, Psychology of Education, History, Philosophy, Sociology, Religion, Teaching Practice, Microteaching, etc.).

Both integrated and autonomous courses on equal opportunities should be considered.

Design and implementation of courses in academic studies i.e. equal opportunities in the foundation and inservice courses for teachers in Mathematics, Geography, Physics, Computer Science, Art, Home Economics, Craft, Design and

Technology ,Languages or any other school subject.

Development of bibliographies, teaching materials both text and audio-visual, handbooks on equal opportunities for use in teacher education.

Design and implementation of courses in the specific educational theory and practice of a given school subject and in the teaching of equal opportunities or Women's Studies as school subjects.

Design and implementation of courses for key groups: Inspectors, vocational and career guidance officers, School management, directors of local educational authorities, education officers and curriculum development officers, project advisers, etc.

Design and implementation of courses for specific target groups of teachers, i.e. kindergarten or pre-school, primary, post-primary (including all age groups in both lower and upper secondary), vocational teachers, vocational trainers, teachers or lecturers in further or higher education, remedial teachers, etc.

Design and implementation of courses for specific models of Teacher Education, i.e. thematic or integrated, discipline-based, concurrent or consecutive, etc.

Design and implementation of courses in equal opportunities for teachers working in single-sex schools and

for teachers working in co-educational schools.

Design and implementation of courses for teachers working with special groups such as ethnic minorities, children of migrant workers, specific socio-economic groups etc.

Design and implementation of courses specifically to enable teachers to promote non-traditional subject choices and careers by girls and boys.

Budget

Each proposal should be costed under the following headings:

Personnel:

Academic, secretarial, documentalist, research or computing.

Travel and subsistence:

Overheads: Stationery, mailing, telephone, fax, photocopying, computer time and materials, etc.

Publication costs:

Desktop publishing, typesetting, illustration, printing translation.

The National Co-Ordinator should indicate to potential participants the likely range of funds available to individual projects.

Such a proposed plan of action corresponds with existing frameworks on equal opportunities within the Department of Education; recognises the constraints in resourcing and personnel; draws on the work of the author and of her team in ATEE already completed, thereby eliminating the need for an initial design phase to this action-research programme; recognises the structures prevailing in teacher education in Ireland and finally, would enable the Department of Education to implement, at minimal cost, its own policies on equal opportunities in education. It is therefore a structure most likely to be accepted and acted upon.

**11. CHAPTER 11 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
FOR FURTHER RESEARCH**

11.1. Summary and Conclusions

1. Chapter 1 outlined the author's background, the genesis of this study and the scope of the thesis.

2. In Chapter 2, as a necessary delineation of the social and cultural context for the research and development undertaken for this thesis, the author analysed the data available on the social status of women and men in Ireland and related the findings on demographic and labour force data to the education of girls and boys. The final section drew attention to the crucial relationship which exists between education and the labour market which act as determinants of the relatively poor social status of women.

3. Chapter 3 examined in greater detail the actual position of women in relation to their participation in education, against a theoretical critique of meritocratic individualism. While overall participation and attainment were seen to be satisfactory up to the level of 18 years of age, they were markedly less satisfactory at third level.

Furthermore it was established that through a combination of differential provision and allocation of subjects coupled with a profoundly sex-differentiated pattern of subject choice, the education of girls and boys was seen to be distinctly different. These differences were especially notable in the language/arts and mathematics/science divide.

4. Having established that mathematics, science and technology are especially important in promoting equal opportunities for girls and boys in education, Chapter 4 considered further the factors in the formal and hidden curriculum which contribute to the differentiated pattern of subject choice and ultimately to differential social and occupational status for women and men. The results of the author's evaluation of pupil attitudes to mathematics and physics in the Pilot Intervention Project in Physics and Chemistry were presented, providing evidence of the deep-rooted and intractable nature of stereotyped views not only of adult roles but ^{also} of ^{the} the nature of intelligence itself and of mathematics and ^{the} sciences in particular.

These findings indicated that a broad and comprehensive programme of teacher education was required to intervene successfully in the interests of promoting the full achievement of potential by all pupils, girls as well as boys.

5. Having established the nature of the problematic of

gender in schooling, Part II of the thesis then turns to the area of teacher education itself and examines in Chapter 5 the structure and nature of teacher education in Ireland in all sectors. The particular difficulties being experienced by teacher education resulting from social and demographic factors are identified.

6. In Chapter 6, the specific issue of gender in teacher education in Ireland is examined, and the results of the author's survey of all Colleges and Education Departments are presented. These indicate the relatively satisfactory structural conditions and very weak curricular provision for teaching in the field variously designated as Women's Studies, equal opportunities or gender issues.

7. In order to place the Irish position in an appropriate comparative context, the status of gender issues in other European countries is examined in relation to both administrative and structural features and initiatives undertaken to promote equal opportunities in education. Chapter 7 draws on the original work of the author and her colleagues in the Association for Teacher Education in Europe. The comparative survey indicates the relatively undeveloped state of equal opportunities throughout the European Community, despite the level of official policy agreement which exists and the admirable programmes and projects undertaken already by isolated individuals and groups. The need for a broadly based and bold initiative in teacher education curriculum is indicated by the findings of Parts I and II and this is the

author's undertaking in the final part of the thesis.

8. Chapter 8 presents the author's proposals and designs for equal opportunities in teacher education which meet the problems, structural characteristics and socio-cultural features detailed in the thesis to this point.

The chief proposal is that of the ATEE curriculum, a framework design, the development of which was funded by the Commission of the European Communities of the European Community. The curriculum was developed by the author as co-ordinator and in collaboration with a team of teacher educators selected by the author from among the network established within the Association for Teacher Education in Europe. In addition to this curriculum the author presents an example of an inservice module for second-level mathematics teachers. This module is designed to elaborate on the framework curriculum and to indicate the nature of a modest proposal which might be typical of small-scale interventions developed to implement the curriculum in Ireland for a particular target group of teachers.

9. In contrast to the "ideal" and intentional character of the material developed for the preceding chapter, Chapter 9 analyses the actual course development undertaken by the author for this thesis over the last five years at Thomond College of Education. In addition to an autonomous module on Gender and Schooling, the author has integrated equal opportunities or gender issues into a

range of courses at TCE. One of these interventions in teacher education curriculum is analysed in detail, namely that of the Microteaching course, for which the author has developed an interaction analysis schedule known as TIPAM.

10 Following this case study of equal opportunities in the curriculum of teacher education at TCE, the author in Chapter 10 develops a theoretical basis for the wider implementation of action-research in the field, drawing from the research in curriculum theory, the sociology of knowledge and Women's Studies. On the basis of this theoretical framework, a proposal for a two-year action-research programme to implement the author's curriculum designs for equal opportunities in teacher education in Ireland is proposed.

11.2. Recommendations

11.2.1. Policy at Central Government Level

It is of vital importance that there is be policy on the part of educational authorities to oblige educational institutions to undertake research and development in this area. Such policy statements will be of great assistance to individuals or institutions who wish to include these matters in all courses offered. Policy statements could take the form of legislation, ministerial regulations, central guidelines or recommendations. The degree of

obligation could range from detailed and compulsory curricula, through general aims common to all institutions, to mere suggestions.

The following proposals¹ are based on methods that have actually been put into operation in some European countries:

- National frameworks or guidelines for primary and secondary schools should explicitly contain equal opportunities between the sexes as a compulsory theme to be dealt with in several contexts. This puts a pressure also on teacher education institutions to include this topic in order to enable future teachers to treat this in an adequate manner.

- The inclusion of equal opportunities issues in national aims for teacher education has proved to be useful to local efforts to integrate this issue in the curricula. Where appropriate the issue should also be included in national framework curricula or guidelines.

- Extending the statutory obligations of the relevant advisory councils, directorates and regional and local

1. The author wishes to acknowledge the contribution of Arnesen and Stromberg of the Norwegian Ministries of Education. The proposals are drawn from Arnesen and Ni Charthaigh, 1987)

educational authorities to include the promotion of national policies on equal opportunities in relation to pre-service and in-service teacher education.

-Especially in an early phase of working with equal opportunities issues in teacher education there is a need for the earmarking of funds for in-service training of teachers and teacher educators to build up a nucleus of advisory personnel in schools and in teacher education to deal with this issue.

- Systematic routines should develop at national policy level to spread information to key personnel with regard to teacher education, e.g. in ministries, advisory councils, directorates, local authorities, universities and other teacher education institutions. Earmarked funds should be set aside for the implementation of such routines.

- A network of contacts must be built up at all levels of educational authorities to be responsible for reviewing the situation and for proposing appropriate measures, in addition to disseminate information on relevant matters.

- Lists of people with special competence with regard to equal opportunities issues in the content of teacher education needs to be made available, both at national and European level.

- A bank of material on equal opportunities and gender

issues relevant to teacher education should be established at the national or the regional level or both.

These recommendation are readily implemented and do not involve major cost to Ministries of Education. The principal recommendation which follows requires considerable funding, but would prove extremely cost-effective.

Action-research

-Action-research programmes which include education authorities and institutions from several countries . Such a programme , already outlined in detail, would lead to the development of new methods in this field through the exchange of experience and ideas originating from different settings. These could be a great source of knowledge and inspiration to teacher educators both inside and outside the programme. Innovation work of this kind would have spin-off effects also to other fields of teacher education, as equal opportunities issues¹² touch on a broad range of other themes and disciplines.

11.2.2. Teacher Education Institutions

12. This recommendation has now been accepted and will be implemented by the author under the terms of agreement no.88-88-EGA-114/IRL with the Commission of the European Communities.

Target groups for the strategies under this heading are primarily senior personnel responsible for the various departments, subject areas or disciplines and other personnel who are actively engaged in promoting equal opportunities in the curricula at their institutions.

- Information on central policies and measures should be disseminated systematically, including information on the machinery available to assist teacher educators in their development of curricula and teaching methods on gender issues. A network of contact people should be considered also at this level.

- The management of each institution/department should inform all working groups engaged in the development of curricula about existing policies on the integration of equal opportunities in teacher education (national and European). The contact persons at each institution should be given the responsibility to provide further information and to see to it that effective routines are established.

- Systematic routines should be developed to integrate the results and perspectives from Women's Studies into teacher education programmes.

- A list of contact institutions or persons dealing with Women's Studies should be made available for teacher educators and teachers.

- Teacher educators who wish to develop equal opportunities as part of various curricula at their institutions may on their own initiative establish a network of educators sharing a common interest in their field of work.¹³

- Teacher educators interested in increasing the role of equal opportunities as a topic in in-service training should make proposals of relevant themes or courses to organisers of such courses. Such proposals need to be well prepared and the present framework curriculum could form a basis for the development of such proposals.¹⁴

11.2.3. Teachers' Organisations

In most member states teachers' organisations have influence on the professional training of teachers by or-----

13. One of the project proposals received by the author to date under the terms of the European Community action-research programme on the integration of equal opportunities in teacher education is a proposal from the United Kingdom to establish such a network nationally.

14. Of the 25 proposals under the terms of the EC project received at the time of writing, a majority are concerned with in-service teacher education.

ganising courses, taking part in professional discussions and by their dialogue with members, management at the institutions, educational authorities and politicians. The involvement of these organisations should be an essential feature of any comprehensive programme to integrate equal opportunities in the curricula of teacher education.¹⁵

11.3. Post Script

The author has been appointed Consultant to the Commission of the European Communities and European Co-ordinator of the Action-research Project on the Integration of Equal Opportunities in the Curriculum of Teacher Education, 1988-1990. A sum of 720,000 ECU's will be allocated by the Commission of the European Communities over the two-year period, to which Member States will add a further 20% minimum financial contribution. National Co-ordinators, as recommended by the author, have been appointed to liaise with the Consultant and, as mentioned in the footnotes, project proposals are being submitted at time of writing by the authorities of the Member States. The curriculum contained as Appendix E has been circulated to all Member States as the reference document for the project, and the Consultant will shortly make a

15. Among the project proposals from Ireland for inclusion in the EC action-research programme is one from the Teacher's Union of Ireland for the development of in-service curricula.

selection of projects to be included in the action-research programme.

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APPENDIX A Resolution of the Council of Ministers of the European Community containing an action programme on equal opportunities for boys and girls in education.

Resolution
of the Council and of the Ministers for Education
meeting within the Council of 3 June 1985
containing the action programme on equal opportunities for girls and boys in education
(85/C 166/01)

THE COUNCIL AND THE MINISTERS FOR EDUCATION, MEETING WITHIN THE COUNCIL,

Having regard to the Treaties establishing the European communities,

Having regard to the resolution of the Council and of the Ministers for Education, meeting within the Council, of 9 February 1976 comprising an action programme in the field of education,¹

Having regard to Council Directive 76/207/EEC of 9 February 1976 on the implementation of the principle of equal treatment for men and women² and in particular Article 2 (4) and Articles 3 and 4 thereof,

Having regard to the Council resolutions and those of the Council and of the Ministers for Education, meeting within the Council, dealing with equal opportunities for women,^{3,4,5,6,7}

Having regard to the Council recommendation of 13 December 1984 on the promotion of positive action for women,⁸

Having regard to the various European Parliament resolutions in favour of women,⁹ and in particular the resolution of 17 January 1984¹⁰ on the situation of women in Europe,

Bearing in mind that educational establishments are a particularly suitable forum for effective action to achieve equal opportunities for girls and boys;

Whereas education and vocational training are among the prerequisites for achieving equal opportunities for men and women in working life and whereas education should therefore contribute to eradicating stereotypes, encourage acceptance of the principles of fair sharing of family and occupational responsibilities and prepare young people adequately for working life;

Bearing in mind the importance of involving all participants in the educational process in implementation of any policy to foster equal opportunities in order to achieve the necessary change in mentalities and attitudes;

Whereas the decisive influence of parents is widely recognized in connection with stereotype-formation, the perception of social roles of men and women and also as regards the duration of schooling and educational and career choices;

¹ OJ C 38, 19.2.1976.

² OJ L 39, 14.2.1976.

³ Resolution on the promotion of equal opportunities for women (OJ C 186, 21.7.1982).

⁴ Resolution concerning vocational training measures relating to new information technologies (OJ C 166, 25.6.1983).

⁵ Resolution concerning vocational training policies in the European Community in the 1980s (OJ C 193, 20.7.1983).

⁶ Resolution on measures relating to the introduction of new information on technology in education (OJ C 256, 24.9.1983).

⁷ Resolution in action to combat unemployment amongst women, and in particular section II (b) thereof (OJ C 161, 21.6.1984).

⁸ OJ L 331, 19.12.1984.

⁹ OJ C 50, 9.3.1984 and OJ C 149, 14.6.1982.

¹⁰ OJ C 50, 9.3.1984.

Bearing in mind the commitment of teachers and their associations to the achievement of equal opportunities for girls and boys in the school system;

Whereas, in addition to policies concerning equal access for girls and boys to all forms and levels of education, positive action is necessary to bring about equality in practice;

Taking note of the report of the Conference on Equality of Opportunity for Girls and Boys in Education (Brussels, 27 and 28 November 1984), organized by the Presidency in conjunction with the Commission,

HEREBY ADOPT THIS RESOLUTION:

I. The Council and the Ministers for Education, meeting within the Council, give their agreement to an action programme which will be implemented within the scope of constitutional possibilities and having regard to the economic, social and cultural context of each Member State, to the funds available and to their respective educational systems. The measures envisaged under this programme are necessary in order to:

- (i) ensure equal opportunities for girls and boys for access to all forms of education and all types of training in order to enable each individual to develop his or her own aptitudes to the full;
- (ii) enable girls and boys to make educational and career choices, in full knowledge of the facts and in good time, affording them the same possibilities as regards employment and economic independence;
- (iii) motivate girls and boys to make non-traditional choices and to follow courses leading to qualifications so that they may have access to a far more diversified range of jobs;
- (iv) encourage girls to participate as much as boys in new and expanding sectors, within both education and vocational training, such as the new information technologies and biotechnology.

The Council and the Ministers for Education, meeting within the Council, accordingly agree that these objectives can be attained if the educational and career choices of girls and boys are made without any restriction as to sex.

The action programme is as follows:

1. Promoting awareness among all the participants in the educational process¹ of the need to achieve equal opportunities for girls and boys
 - (a) Encouraging the eradication of sex stereotyping through coordinated action to raise awareness such as information campaigns, seminars, lectures, debates and discussions;
 - (b) encouraging exchanges of information on innovative projects in this field and ensuring that it is as widely disseminated as possible;
 - (c) preparing and distributing at national level texts bringing together results of experience, recommendations and practical guidance aimed at achieving equal opportunities.
2. Educational and vocational guidance as a service to all pupils to encourage girls and boys to diversify their career choices

¹ In particular, children, parents, inspectors, heads of educational establishments, teacher-training staff, teachers, educational counsellors, guidance officers, local authorities.

- (a) Ensuring that information is given as early as possible on working life and delay the introduction of options, since premature specialization leads to a preference for traditional course options and maintains segregation;

ensuring that information, counselling and guidance services are available to all pupils throughout their school career and in particular at all the key points at which course options are decided;

making it possible to switch courses during the school career, e.g. by means of bridging classes;

- (b) encouraging diversification of girls' and boys' educational and career choices, particularly by:

(i) introducing both girls and boys to new technology from the end of primary school in all educational establishments,

(ii) training guidance officers in the specific aspects of educational and career guidance relating to girls (encouraging diversity of choice, in particular new careers connected with new technologies, and providing follow-up and support for girls who take non-traditional options, etc.),

(iii) ensuring effective cooperation between school guidance services and parents and teachers as well as between school and vocational guidance, training and job-vacancy services.

3. Opening up schools to working life and the outside world, in particular by organizing, at all levels, pupil contact with working life, especially where non-traditional work for women is being promoted, and with the outside world in general (associations of young people, occupational bodies, etc.).

4. Extending the possibilities for effective access by both girls and boys to all vocational training options and supporting, through suitable measures, girls and boys who have chosen non-traditional openings.

5. Including the question and pedagogics of equal opportunity in teachers' initial and in-service training. Teachers' courses could for instance include the components needed to encourage girls to take up the natural sciences and mathematics, and information on the vocational opportunities offered by these disciplines.

6. Reinforcing coeducational practices in mixed educational establishments

In mixed educational establishments encouraging all pupils to participate in school and extra-mural activities, including activities traditionally considered as being either for the male or female sex and stimulate in particular equal participation by girls and boys in technical and scientific options.

7. Developing a balance between men and women holding positions of responsibility in education

Encouraging children to develop a positive perception of equality of the sexes by promoting a balanced distribution of men and women working in the educational sector; to this end, encourage action aimed at improving the balance in terms of postings, promotion and training. This improved balance should cover both the subjects taught and the levels of the posts occupied.

8. Eradicating persistent stereotypes from school textbooks, teaching material in general, assessment materials and guidance material

- (a) Creating structures or using existing structures for equal opportunities for girls and boys with a view to establishing criteria and drawing up recommendations aimed at eliminating stereotypes from school books and all other teaching and educational material, with involvement of all the parties concerned (publishers, teachers, public authorities, parents' associations);
 - (b) encouraging gradual replacement of material containing stereotypes by non-sexist material.
9. Special measures helping the underprivileged, particularly girls who receive very little encouragement from their families to pursue school activities and the children of migrant workers (prevention of illiteracy, language training). These measures are aimed at pupils, teachers and parents. They are particularly concerned with informing migrant workers of the educational options available in the host country.
10. Introducing specific measures to encourage the promotion of programmes for equal opportunities for girls and boys, with a view to:
- (i) encouraging the implementation in schools of specific measures based on guidelines agreed at national level;
 - (ii) drawing up annual reports on action taken;
 - (iii) encouraging the training of school advisers specifically appointed to make recommendations, give advice, suggest initiatives and assess measures taken;
 - (iv) reviewing the text of regulations (such as circulars) with a view to eradicating discrimination and stereotypes from them;
 - (v) encouraging the use of existing agencies with expertise in matters concerning equal opportunities for girls and boys in monitoring progress in this area.

II. The Commission of the European Communities will take the necessary measures to:

- (i) promote the principle of equality between girls and boys in all Community action and policies connected with education, training and employment policy, and in particular promote a spirit of enterprise among girls as well as boys in order to facilitate their transition from school to working life,
- (ii) extend the programme of study visits to include teacher training staff, guidance officers, inspectors and administrators with particular responsibility for equal opportunities for girls and boys at school, in order to broaden their practical and vocational experience,
- (iii) provide supplementary data, particularly through studies on equal opportunities for girls and boys in education, circulate the results and improve the exchange of information on positive action by using the Eurydice network,
- (iv) ensure close cooperation with teachers' associations organized at European level in implementing and promoting measures for equal opportunities for girls and boys,
- (v) in collaboration with parents' associations organized at European level, launch information campaigns on the choice of school courses and the division of tasks between girls and boys and aimed at eliminating stereotypes,
- (vi) set up a Working Party composed of those having responsibility at national level for matters concerning equal opportunities for girls and boys in education and of representatives of the competent bodies (experts, equal opportunities boards) to pool Member States' experience and follow up and assess the implementation of the action programme; this Working Party to report to the Education Committee,

- (vii) support, on the basis of specific criteria (e.g. transferability to other Member States), certain action undertaken by Member States, particularly the launching of innovatory programmes of projects, and actions which foster exchanges between Member States,
 - (viii) support Member States in drawing up and circulating practical recommendations aimed at achieving equal opportunities, particularly by preparing Community guidelines.
- III. The Council and the Ministers for Education, meeting within the Council, call upon the Commission to give careful consideration, in the framework of the rules governing the Social Fund, to applications relating to the training of instructors and guidance counsellors undertaken in the context of positive action to ensure equal opportunities for girls and boys in education.
- IV. The Council and the Ministers for Education, meeting within the Council, call upon the Education Committee to submit, in two years' time, a first progress report on action taken by the Member States and the Community to foster equal opportunities for girls and boys in education.
- V. Community funding of the action outlined in section II and the extent thereof will be decided in accordance with the Community's budgetary rules and procedures.
- VI. This Resolution will be forwarded to the European Parliament and to the Economic and Social Committee.

APPENDIX B Questionnaires administered to participants
and non-participants in the Pilot Intervention Project in
Physics and Chemistry 1988.

PILOT INTERVENTION PROJECTS IN PHYSICS AND CHEMISTRY

Pupils' Questionnaire No 1

This is a confidential questionnaire. Your answers will be used for research purposes only

School _____

1. Are you taking any Science subjects at Leaving Certificate?
Please enter a tick in the box for those you are taking.

Chemistry ☐

Biology ☐

Physics and Chemistry combined ☐

2. Why did you not choose to do Physics for Leaving Certificate?
Please indicate the principal reason only by circling the letter (A to F) before the statement.

A. It clashed on the timetable with another subject I wanted to do

B. I didn't do well enough in Inter Cert Science to be allowed take Physics

C. Physics is too difficult

D. Physics will not be useful to me in the career I want

E. Physics is not interesting

F. I'm not good enough at maths to do Physics

G. I was discouraged by others (Please indicate whether friends, parents or teachers) _____

G: other reason (please state) _____

3. Why in your opinion, is the number of girls taking physics low in comparison with the number of boys?

Thankyou for completing this questionnaire

PILOT INTERVENTION PROJECTS IN PHYSICS AND CHEMISTRY
Pupil's Questionnaire No 2
PHYSICS

This is a confidential questionnaire. Your answers will be used for research purposes only.

School _____

Year _____

Please indicate the extent to which you agree or disagree with the following statements by circling the appropriate number.

- 1 = I agree strongly
2 = I agree
3 = I neither agree nor disagree
4 = I disagree
5 = I disagree strongly

Agree strongly 1	Agree 2	Undecided 3	Disagree 4	Disagree strongly 5
------------------------	------------	----------------	---------------	---------------------------

1. I decided to study Physics because it will be useful to me in my future career.

1	2	3	4	5
---	---	---	---	---

2. I decided to study Physics because it is interesting

1	2	3	4	5
---	---	---	---	---

3. I decided to study Physics because I'm good at maths

1	2	3	4	5
---	---	---	---	---

4. I decided to study Physics because I was encouraged by teachers

1	2	3	4	5
---	---	---	---	---

5. I'm glad I decided to study Physics

1	2	3	4	5
---	---	---	---	---

	Agree strongly 1	Agree 2	Undecided 3	Disagree 4	Disagree strongly 5
6. Physics is difficult	1	2	3	4	5
7. Physics is really a boy's subject	1	2	3	4	5
8 I would prefer to be taught Physics by a woman teacher	1	2	3	4	5
9. My parents are pleased I'm studying Physics	1	2	3	4	5
10. Physics deals with practical applications which are of benefit to humanity	1	2	3	4	5
11. Please tick which of the items below you find the most difficult and which you find the most interesting in Physics					
	Most difficult		Most interesting		
a. Electricity and Magnetism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Light	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Sound	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Modern Physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The atom and the nucleus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Mechanics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Other (Please state)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Please write below what you think would improve the physics course you are taking.					

Thankyou for replying to this questionnaire.

APPENDIX C Admissions criteria for entry to Colleges of
Education for Primary teachers.

Appendix I

1983 OPEN COMPETITIVE EXAMINATION

for admission to one of the six Colleges of Education to train as a primary school teacher

Programme of qualifying tests—Interview, oral Irish and Music—to be held in September 1983

The three compulsory tests will be held in the Colleges of Education during September 1983. Candidates who have not been eliminated will be notified by post (or in such other manner as may be arranged by the Department), of the venue and time when they should present themselves. Candidates must attend at their own expense. Late or non-attendance may, unfortunately, cause a candidate to be eliminated from the competition.

Candidates must bring with them to the tests a certified statement, on the forms provided, from their school showing their Leaving Certificate results. Candidates will not be interviewed without the certified statement(s).

Order of Merit List—Interview, Oral Irish and Music Test converted to points

Interview		Oral Irish		Music	
Grade	Points	Grade	Points	Grade	Points
A	100	A	40	A	20
A minus	90				
B	80	B	32	B	16
B minus	70				
C	60	C	24	C	12
C minus	50				
D	40	D	16	D	8
E	Fail	E	Fail	E	Fail

Note: Candidates who fail the Interview or oral Irish test are automatically eliminated from the competition.

The Interview. Candidates will appear before an interview board who will ascertain their suitability for the course of training as national teachers. Part of the interview may be conducted in Irish.

The Oral Irish Test. The test will be comprised of two parts:

- (a) conversation on every-day topics and on books read by candidates;
- (b) reading correctly and intelligently a suitable passage of prose and/or poetry and explaining the matter read.

Note: As a high standard of fluency is required in this examination, it is desirable that candidates from English-speaking districts should, if possible, arrange to improve their knowledge of oral Irish by spending a period, or periods, in the Gaeltacht.

The Music Test. All candidates attention is drawn to the fact that attendance at the music test is now compulsory due to the fact that music is a subject in the curriculum of the Colleges of Education.

A total of 20 points, converted from the marks below, are allocated to the music test.

More detailed information concerning the music test is available from the Colleges of Education.

Music Test		
	Number of marks	Number of points
Singing (four songs to be selected from a list)	80	8
Sight Reading	60	6
Ear Test	30	3
Instrumental (instrument optional)	30	3

APPENDIX D Questionnaire to Colleges and Departments of
Education on the place of gender issues in the cur-
riculum.

Equality of Opportunity in Teacher Education

Institution _____

Address _____

Phone no(s) _____

President/Principal/Director _____

Registrar _____

Head of School of Education _____

Head of Mathematics _____

Other liaison staff _____	Position _____
---------------------------	----------------

Term dates 1985/86 _____

Data on programmes in Initial Teacher Education offered by institution

Programme	First graduating class	Validating body	Title of Award	Hons/ Pass	Duration	Part time Full time	Concurrent (cc) Consecutive(cv)
-----------	------------------------------	--------------------	-------------------	---------------	----------	------------------------	------------------------------------

Current student enrolment in initial teacher education programmes

Programme	Year	Enrolment female	male	%female
-----------	------	---------------------	------	---------

Total all years

Entry characteristics of students

Average age on entry

Academic standard

SES data

Admissions requirements: Graduate programmes

Requirements established by _____

Admissions procedures administered
by _____

Award _____

Degree qualifications

Special requirements

Admissions requirements: undergraduate programmes

Award _____

Points system yes ☐ no ☐

Details

Special requirements

Interview yes ☐ no ☐

Details

Specific requirements for male students

Specific requirements for female students

Admissions requirements: mature students

Admissions requirements other special categories

Examinations data

Award _____

Year _____

Total no of candidates _____

Males _____

Females _____

Females as a % of total candidates _____

Class of award	males	females	females as a % of awards in this category
1			
2			
3			
4			
5			
6			

Comments:

Rubric of examinations:final award

Element	Marks available	%of total marks	no of papers
---------	-----------------	-----------------	--------------

Graduate destinations in year following graduation

Award _____ Year _____

Destination	Males	Females	%female
-------------	-------	---------	---------

Full time teaching

temporary

permanent

Part time teaching

Employment other than teaching

Seeking employment

Other

Teacher Education Staff: Academic grades full time

Grade	males	females	%female
-------	-------	---------	---------

total

total

total

College Officers	male	female	% female
------------------	------	--------	----------

Teacher Education staff; Academic/part time

Area	male	female	% female
------	------	--------	----------

Horizontal distribution of Education Staff: Full time only

Branch of Educational studies	Male	Female	%female
-------------------------------	------	--------	---------

History

Philosophy

Psychology

Sociology

Curriculum

Teaching

Microteaching

Educational Technology

Methodology

Other

Qualifications of staff by grade, by sex

Staff grade _____

Highest qualification	males	females	%females
-----------------------	-------	---------	----------

PhD

Master's degree

Primary degree

Teaching Diploma or
Certificate

Other

Curriculum structure

Award _____

Total no of hours _____

Distribution of time

Element of programme	hours	% of time
----------------------	-------	-----------

Educational Studies

Curriculum studies/
Methodology

Foundational studies

major

minor

Teaching Practice

Other

Differentiation in curricular provision for males and females

Please indicate which areas of curriculum, if any, are taken exclusively by males or females e.g. additional dance classes for females, infant education studies etc.

Element of programme	males only	females only
----------------------	------------	--------------

Educational studies
details:

Curriculum/
methodological studies
details:

Foundational studies
details:

Teaching Practice
details:

Other
details:

Separate instruction for males and females

Please indicate whether separate instruction for males and females is given (e.g. in Physical Education programmes)

Element of programme	details
----------------------	---------

Educational studies

Curriculum/
Methodology

Foundational Studies

Teaching Practice

Other

Equality issues in the curriculum: Present status

- | | |
|---------------------------|-----|
| 1. Human rights issues | HR |
| 2. Minority rights issues | MR |
| 3. Sex equality issues | SX |
| 4. Social class issues | SES |

Please indicate by use of these codes (where appropriate) the major focus of the treatment of equal rights.

Element of programme	Code	Details
----------------------	------	---------

Educational Studies

Curriculum and teaching

Teaching Practice

Foundational studies

Other

Equality issues in the curriculum: Future possibilities

Please indicate elements of the curriculum which you consider could deal with the issues of equality of opportunity for girls and boys

Element of programme

Aspect of equality
which could be
dealt with

Mathematics courses:

Please indicate elements which you consider could deal with issues of equality of opportunity for boys and girls.

Element of programme

Aspect of equality which
could be dealt with

Science and Technology programme

Please indicate elements of the programme which you consider could deal with the issues of equality of opportunity for girls and boys

Element of programme

Aspect of equality which could be dealt with

APPENDIX E The ATEE Curriculum.

EQUAL OPPORTUNITIES FOR GIRLS AND BOYS

A CURRICULUM FRAMEWORK FOR TEACHER EDUCATION

WITH GUIDELINES FOR ACTION

Edited by Anne-Lise Arnesen and Dearbhal Ní Chárthaigh

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Any errors or omissions of the report remain however the responsibility of the project co-ordinators.

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Section A

INTRODUCTION

The purpose of this document is to provide for teacher educators in EEC member states a guideline for implementing curriculum development in the area of equal opportunities in teacher education programmes.

The document comprises a **framework curriculum** in educational theory and practice courses and **strategies** for implementation, including an outline of action research programme in the member states.

The document should be read in the context of the Resolution of the Council and Ministers of Education of the European Communities containing an action programme on equal opportunities for girls and boys in education. (See Appendix A) which identifies as one of the elements of that action programme

"Including the question and pedagogics of equal opportunities in teachers' initial and in-service training"

It is not intended that the material presented herein should be taken as a prescription for practice as the conditions in which teachers are trained vary not only from one member state to another but among the institutions of teacher education within each country. Rather it is hoped that the report will serve as a starting point for the development of appropriate courses and programmes and will be used as a stimulus and discussion document.

In recognition of the differing situations which exist in teacher education, the second section of the report deals briefly with national situations and makes recommendations for implementation in each country.

In recognition of the variations in national and institutional circumstances, the curriculum does not indicate an allocation of time and effort to various components, but rather presents a comprehensive outline of issues which the teacher educator can adapt to circumstances.

Section B

AIMS OF THE CURRICULUM

1. To promote the personal development of the teacher through a process of exploration and exchange of experiences and analysis in which each teacher is enabled to identify the influence of sex role socialisation in their own development and behaviour in a variety of social (including professional) contexts.
2. To enable the student teacher to demonstrate their commitment to equal opportunities through their relationships with others and through the conduct of their profession.
3. To provide the student teacher with an understanding of the gender dimension of knowledge and its expression through the school curriculum.
4. To provide the student teacher with a knowledge of gender in equality in historical and crosscultural perspective and in relation to other forms of inequality based on race, social class and ethnic origin: of gender and schooling and the functioning of inequality in the classroom, the school and the societal context of education; of the policies and actions which promote equal opportunities in education.
5. To enable the student teacher to promote equal opportunities through the application of the personal insights, attitudes and knowledge acquired to the professional tasks of creating classroom climate, selecting and structuring content and materials, the selection and use of appropriate teaching and assessment procedures and through classroom interaction and organisation.

In designing a curriculum to meet the need to include equal opportunities in the curriculum of teacher education, as specified in the Resolution of the Council of Ministers, it is evident that many of the other elements of the action programme on equal opportunities for girls and boys in education are also being promoted. In particular, the curriculum contributes to

- * the raising of awareness ,
- * the provision of vocational guidance to encourage girls and boys to diversify their vocational choices,
- * reinforcing co-educational practices in mixed educational establishments,
- * the development of a balance between men and women holding positions of responsibility in education
- * to eradicating persistent stereotypes from school textbooks, teaching , assessment and guidance material, and
- * the development of special measures to help the under privileged.

The curriculum framework adopts, however, a particular approach to these and other elements of equal opportunities, in that teacher education is uniquely concerned with the transmission of culture through the selection and structuring of knowledge itself. What is taught in schools in the form of school subjects and how that knowledge is taught are essential concerns of teacher education. Action to promote equal opportunities in education must therefore include a consideration of both the content and methodology in use in teacher education itself and in schools.

As this curriculum framework is based on the courses in educational theory and practice (pedagogy and didactics), it provides a basis for a critique of the content of the academic disciplines or subject areas (such as Geography, Biology, Home Economics, Craft and Design etc.) which also form part of the formation of a teacher. It cannot however, deal with each discipline or subject area, and a fully effective teacher education for equal opportunities would require that this be undertaken.

Section C

APPROACHES TO TEACHING AND ASSESSMENT

The curriculum on equal opportunities requires that the student teacher consider the research available on the appropriateness of various teaching and assessment approaches in the context of equal opportunities. It is therefore essential that the teaching and assessment employed in the teacher education programme itself should provide a model of the kind of teaching and assessment to be employed by the student teacher.

Much of the material of this curriculum touches on areas of personal development, self-concept and on sensitive and often controversial issues. Particular attention should therefore be given to identifying the characteristics of the student group and to the choice of appropriate methods. Teaching of an interactive nature based on small groups working in a supportive atmosphere will have a particular place in promoting personal development.

Other elements of the programme involve a heavy information load and will be incorporated into a range of appropriate methodologies such as lectures, assignments, projects, while the acquisition of professional skills may suggest microteaching, simulation or audio visual approaches. It is not suggested however, that there is a rigid distinction of knowledge, skills and attitudes, with methods appropriate to each. All three domains are interrelated and a wide variety of approaches will suggest themselves to the teacher educator in respect of her/his own institutional and social context.

In the action programme to develop and implement the curriculum, it is hoped that the a number of projects on the issue of methodologies appropriate to equal opportunities in teacher education courses and in schools will be proposed. In this manner, the question of appropriate strategies can be pursued in a variety of settings and the results of such programmes of action research shared widely among teacher educators in other institutions.

Section D

CONTENT OF CURRICULA

1. SEPARATE INTRODUCTORY OR INSERVICE MODULE

1.1. INTRODUCTION

The content headings which follow are intended to indicate the topics which might be included when equal opportunities is being taught in a separate or stand-alone course either as a starting point for preservice education or as an inservice course dealing with equal opportunities.

The content headings also provide a "menu" from which teacher educators may select topics for inclusion in other areas of their programme.

The time allocation is not specified, as the conditions will vary widely from one situation to another, and while the content suggested attempts to be comprehensive, teacher educators will adapt, delete, add to or modify as suits their circumstances.

1.2. THEMES

1.2.1. Self and sex-roles

This theme should enable student teachers to engage in an exploration of attitudes and perceptions in relation to equal opportunities

Non-confrontational exchange of experiences and views among students relating to the following:

- * The socialization process
- * Sex-roles, ascribed and achieved
- * Perception and attribution of characteristics on the basis of sex; masculinity and femininity as social constructs
- * Allocation of activities on the basis of sex-roles
- * Discussion of sexism, bias, discrimination, stereotyping, positive action etc. should include a clarification of terminology in current use in equal opportunities.
- * Sexuality
- * Current social issues in relation to gender
- * Child sexual abuse; sexual violence : sexual harassment of students
- * Media representation of women and men; language and visual images
- * Teachers' expectations and perceptions of pupils as boys and girls
- * Norm conflicts among teachers on the issues of equal opportunities

1.2.2. Equal opportunities in historical perspective

Students should gain understanding and insight into the history of gender relations including political, economic and social perspectives. Particular emphasis should be given to cross-cultural and historical studies illustrating the variations in gender over time and place

- * The evolution of human societies - Matrilocal societies; gatherer-hunter societies; the rise of patriarchy in its various forms; feudal, industrialised, capitalist and socialist societies;
- * Economic, social and psychoanalytic theories for the existence of gender differences: theories of patriarchy;
- * Nature and culture; sexual division of labour; power and authority; male and female roles in production and reproduction;
- * Social change and gender in modern society; urban and rural communities, racial and ethnic minorities;
- * History of the women's movement.

1.2.3. Education and work

This theme should enable the students to gain knowledge of and insight into relationships between education and the labour market.

- * Definitions of work; paid and unpaid, productive, reproductive and caring;
- * Adult education and training for entering or re-entering the labour market;
- * Segregation of the labour market into male and female occupations, earnings, employment and unemployment trends;
- * The life cycles of women and men related to domestic responsibilities and paid employment;
- * Horizontal and vertical segregation of the labour market (by horizontal segregation is meant the clustering of women and men into different sectors and occupations : by vertical segregation is meant the clustering of women and men into different levels or grades within each sector or occupation)
- * Levels of earnings and the differential between the earnings of women and men; the impact of equal pay legislation in member states; the feminization of poverty;
- * The conditions of employment and unemployment of women and men; part-time, temporary and full-time work; shift work, flexitime and work in anti-social hours;
- * The double burden (by which is meant that women who work in paid employment may also have responsibility for domestic work and child care);
- * Education and training and the transition from school to work; gender, race and social class issues;
- * Gender issues in the EEC programmes of Vocational Preparation and Training.

1.2.4. Schooling and career choices

This theme is intended to provide student teachers with general information about the position of boys and girls, men and women, in the education system and about the intersection and interaction of race, class and ethnic origin with gender in determining the outcomes of education in vocational and career patterns.

- * National and European policies on the education of girls and boys;
- * Participation rates in school subjects;
- * Achievement and attainment levels in examinations;
- * The structure of schooling- Single sex and coeducational education; consequences for academic attainment and social behaviour of girls and boys;
- * Differentiation in curriculum for girls and boys;
- * The extent of provision of core and optional subjects for girls and boys;
- * Subject specialization or the liberal curriculum, i.e. the extent to which boys and girls concentrate on subjects in particular areas such as science or business studies or choose across a wide range of subjects; the consequences of specialization for future career choices;
- * Allocation rules in schools i.e., the extent to which a subject which is provided by a school is allocated to girls and boys on the same basis;
- * Promoting non-traditional subject choices through the timetabling of options;
- * Encouraging girls to participate in new and expanding sectors such as New Information Technology and Biotechnology;
- * Pupils' true rates of choice; i.e., the extent to which the participation rates of girls and boys differ even when a subject is provided and allocated on the same basis to both sexes; explanations for this phenomenon;
- * The consequences of subject choice for career planning;
- * Entry qualifications for further education or the labour market;
- * Investment in education by the individual and the returns in the form of earnings and social and occupational status;
- * New technologies and the implications for subject choice;
- * Vocational and career guidance by teachers;
- * Planning of career and personal life.

1.2.5. Equal opportunities in school

The purpose of this theme is to provide the student with knowledge and insight into the influence of education in reinforcing or reproducing gender relations. This will comprise sub themes such as gender and curriculum, the hidden curriculum, classroom interaction, textbooks and teaching materials and the assessment of pupil learning.

- * School knowledge as a social construct or artefact; how knowledge is produced, selected, legitimated and transmitted;
- * Patriarchal forms of knowledge, for example, history based on military and political events to the exclusion of social history and the resultant invisibility of women;
- * Critiques of traditional research women's contribution to the production of knowledge: new feminist scholarship and research which contribute to the conceptual development of disciplines and subjects;
- * The role of women and men in the production and dissemination of knowledge;
- * The gender of knowledge i.e. the extent to which subjects are perceived as "male" and "female";
- * Textbooks as vehicles for the transmission of that knowledge which is deemed legitimate and public by society;
- * The representation of women and men in both pictures and text (not only numerically but also the manner in which they are represented and the values accorded to them);
- * Language in texts;
- * The male as the norm for human experience, titles, occupational titles, the use of examples drawn from the experience of only one sex;
- * The design of non-sexist materials;
- * Gender differences in performance on different types of test or examination;
- * Designing sex-fair assessments. Research on alternative approaches to the teaching of the subject which promote participation and attainment by both sexes e.g., the teaching of natural and physical sciences or the teaching of new information technologies;
- * The hidden curriculum;
- * School ethos and culture;
- * Classroom interaction;
- * Norms for behaviour of girls and boys; discipline, deviance and delinquency;
- * School rules and organisation;
- * Rituals in school - school uniforms or dress codes, ceremonies;
- * Pupils' participation in school management or decision making;
- * Division of labour in classrooms and schools;
- * Male and female teachers as role models for pupils;
- * Allocation and use of space and resources to boys and girls in education;

- * Analysis of the gender issues in school subjects; curriculum content, textbooks, assessment or testing, teaching methodologies.

1.2.6. Equal opportunities in educational administration & educational management

This theme is intended to provide student teachers with insight, information and skills which will enable them to advance in their careers by undertaking a wide range of managerial, administrative and academic responsibilities.

- * The woman manager
- * Leadership styles, conflict management
- * Interpersonal skills and communication
- * Assertiveness training
- * Networking
- * Planning for personal, social and professional development
- * Stress and the woman manager
- * The employment and career patterns of women and men in the teaching profession at all levels; part-time, temporary and full-time work; qualifications and promotion to senior or managerial positions
- * The participation of women and men in decision-making in schools
- * Positive or affirmative action, equality legislation

2. MODELS FOR INTEGRATION INTO PRE-SERVICE/INITIAL TEACHER EDUCATION PROGRAMMES

2.1. INTRODUCTION

In initial teacher education it is possible and even advantageous to apply a separate introductory course as indicated in the module in addition to the integration of equal opportunities issues as described in the following.

Two approaches are outlined here in recognition of the fact that teacher education programmes differ in the structure they adopt. Some are organised thematically i.e. around themes such as "the classroom", "the school as an organisation" while others adopt a discipline based approach. In this latter structure, the contributing disciplines of History, Philosophy, Psychology, Sociology and Curriculum theory, Didactics form the organising principle rather than themes. Some institutions adopt a combination of these two approaches.

When using this framework, it is hoped that teacher educators will, where our approach does not correspond closely to that in use in their institution, amend, adopt and modify as appropriate to their circumstances, permitting equal opportunities to be integrated readily in the existing curriculum of teacher education.

In the first model, we suggest a way of presenting equal opportunities in a three level thematic approach, taking as our starting points "the classroom" studies of gender issues. This is followed by "The school" and then by studies of "Education and Society".

2.2. THEMATIC MODEL

Any classification of themes and sub-themes poses problems. Certain items could be placed under different headings and in different contexts. Items which belongs naturally under more than one theme are sometimes repeated under the various relevant headings. However, it is assumed that the users of this framework would look through the whole thematic "menu" to find relevant items to suit their own topic or purpose.

2.2.1. Equal opportunities in the classroom

The purpose of this theme would be to enable the student teacher to understand what pupils bring to the classroom environment when entering school and at the various stages of their schooling. The topics outlined concern therefore a developmental perspective on childhood and adolescence as experienced by girls and boys and also the significant others, such as peers, parents and teachers who influence this development.

- * The social and psychological and physical maturation of girls and boys and their cognitive, affective and moral development;
- * Sex, gender and self-concept;
- * The family as a socialization agent of girls and boys; parents' expectations; parenting roles; household tasks;
- * Play; use of space; language; children's culture; toys;
- * Nature/nurture controversies on sex-differences; critiques of traditional research in the social and behavioural sciences;
- * Biological determinism and the construction of "the feminine" and "the masculine" ;
- * Intelligence and aptitude; sex-differences and similarities-language, mathematical ability, visual-spatial ability; deficit theories of

sex-difference;

- * Behavioural differences and similarities; aggression and competition, dominance and submissiveness, conformity and deviance;
- * Differences and similarities in learning styles and cognitive approaches;
- * Childhood in other cultures and at other periods of history; the variation in sex-roles or gender across cultures and over historical time;
- * Youth culture; puberty, adolescent development; psycho-sexual development in girls and boys;
- * Pupils' self image, self awareness and educational self confidence; attribution of causes for success and failure in school work;
- * Estimation of abilities by girls and boys; perceptions of own and opposite sex;
- * Motivation and demotivation;
- * Relationships among girls, among boys and between girls and boys in different stages of development;
- * Perceptions and expectations of future roles in adult life including sex, family work and leisure
- * The teacher as a product of sex-role socialization
- * Teachers' perceptions and expectations of self and others including pupils;
- * Classroom behaviour of teachers as a consequence of gendered perceptions and expectations;
- * Classroom interaction and management
- * Questioning, praise, criticism, instruction on task, classroom organisation, allocation and distribution of resources; differential rewards and negative sanctions for girls and boys;
- * Social class, race, ethnic origin as they intersect with gender and shape differing behaviours and expectations by teacher and pupils;
- * Sociometric analysis of the classroom; friendship groupings among boys, among girls and in mixed sex groups; the consequences for the planning of lessons and classroom organisation; leadership, management and responsibility for girls;
- * Competitive and cooperative learning strategies;
- * The use and distribution of resources to promote equity;
- * Textbooks as vehicles for the transmission of that knowledge which is deemed legitimate and public by society;
- * The representation of women and men in both pictures and text (not only numerically but also the manner in which they are represented and the values accorded to them);
- * Language in texts;

- * The male as the norm for human experience, titles, occupational titles, the use of examples drawn from the experience of only one sex;
- * The design of non-sexist materials;
- * Gender differences in performance on different types of test or examination;
- * Designing sex-fair assessments. Research on alternative approaches to the teaching of the subject which promote participation and attainment by both sexes e.g., the teaching of natural and physical sciences or the teaching of new information technologies.
- * The hidden curriculum; School ethos and culture;
- * Classroom interaction;
- * Norms for behaviour of girls and boys; discipline, deviance and delinquency;
- * School rules and organisation;
- * Rituals in school - school uniforms or dress codes, ceremonies;
- * Pupils' participation in school management or decision making;
- * Division of labour in classrooms and schools;
- * Male and female teachers as role models for pupils;
- * Allocation and use of space and resources to boys and girls in education;
- * Analysis of the gender issues in school subjects; curriculum content, textbooks, assessment or testing, teaching methodologies;

2.2.2. The school as an organisation

- * Single sex and coeducation;
- * The aims of the school in relation to equal opportunities curriculum for girls and boys;
- * The hidden curriculum-social interaction in the school; norms for behaviour of girls and boys; discipline, deviance and delinquency;
- * School rules and organisation; rituals in school - school uniforms or dress codes;
- * Pupils' participation in school management or decision making; pupil councils, leadership, management and responsibility
- * Division of labour in classrooms and schools; male and female teachers as role models for pupils;
- * Allocation and use of space and resources to boys and girls in schools;
- * Special education: the gender dimension in the identification of special needs;
- * Differentiation in curriculum for girls and boys; horizontal and

vertical segregation ; streaming, setting and banding and the consequences for girls and boys;

- * The extent of provision of core and optional subjects for girls and boys;
- * Subject specialization or the liberal curriculum, i.e the extent to which boys and girls concentrate on subjects in particular areas such as science or business studies or choose across a wide range of subjects; the consequences of specialization for future career choices;
- * Allocation rules in schools based on previous levels of attainment; timetabling of options;
- * Pupils' true rates of choice; different participation rates for girls and boys where a subject is provided and allocated on the same basis; explanations for this phenomenon;
- * Entry qualifications for further education or entry to the labour market;
- * The relationship between subject choice and subsequent career
- * Investment in education by the individual and the returns in the form of earnings and social and occupational status;
- * Vocational and career guidance by teachers

2.1.3. School and society

- * The aims of education in society; explicit and implicit aims, variations across cultures and over time;
- * Ideology and education; education as cultural reproduction, transmission of values or education for social progress and change. Patriarchy as an educational paradigm;
- * The production, selection and transmission of knowledge; women's and men's role in this process;
- * Invisibility and marginalisation of subordinate groups in the educational system to include race, class, religion, ethnic origin and gender
- * Development of educational provision for girls and boys; the educational agencies- public and private, church and state;
- * Women's and men's participation in education and training in global perspective; sex-differences in adult literacy levels;
- * Women and men in the teaching profession; levels of responsibility and authority in education; career patterns and promotion; the feminization of teaching;
- * Education and work; definitions of work, paid and unpaid, productive and reproductive, caring;
- * Education and the labour market; cost-benefit analysis for women and men; investment in education; manpower policy - the effects of allocation of resources to sectors of the labour market and the impact on the education and training of women and men;
- * Horizontal and vertical segregation of the labour market (by horizontal segregation is meant the clustering of women and men

into different sectors and occupations : by vertical segregation is meant the clustering of women and men into different levels or grades within each sector or occupation); public and private sector employment and the black economy; the domestic economy. Impact on the planning of education and training;

- * Levels of earnings and the differential between the earnings of women and men;
- * The impact of equal pay legislation in member states;
- * The feminization of poverty;
- * The conditions of employment and unemployment of women and men; part-time, temporary and full time work; shift work, flexitime and work in anti-social hours;
- * The double burden (by which is meant that women who work in paid employment may also have responsibility for domestic work and child care);
- * The correspondence between a gender differentiated education and a gender differentiated labour market;
- * Strategies for promoting equity; national and European Community;
- * National and European Community policies on equal opportunities in education, training and work; legislative frameworks.

2.3. DISCIPLINARY MODEL

We have selected the following disciplines as a focus for the outline as they appear most frequently in outlines of teacher education (pedagogy) courses in European countries: History, Philosophy, Psychology, Sociology, Curriculum Theory and Practice (pedagogy and didactics).

The borders between the various disciplines can be subject to discussion. Some of the items under one discipline might be classified under a different one or in more than one discipline. It will therefore be appropriate to regard all disciplines included in this model as a whole and especially look to adjacent disciplines for additional items/themes to be included.

The list is not exhaustive. It might therefore be useful to search for relevant themes also under the thematic model or under the separate module.

2.3.1. History of Education

In relation to the period and culture being studied, the following items could be included:

- * - Access and provision (options, resources etc.) available for girls and women in education compared to that of boys and men, and the interaction with social class, race or sub-culture.
- * - The dominant social and political views of a particular period in regard to the nature and roles of the sexes. The impact of these views on the kinds of education and upbringing given to girls and boys respectively;
- * - The relative power, influence and control held by women and by men. Variations according to social class. The distribution of power and influence between the public world and the private and domestic world;
- * - The portrayal of women in traditional works on the history of education;
- * - Womens' actual role in education; as teachers, as scholars, as pupils in both the public and the private domains. The role of women in these respects in relation to contemporary views on womens' role in society in general. Historical changes and their causes;
- * - The contributions of women in the production of knowledge in different periods. The extent to which their knowledge has been transmitted through the educational system;
- * - The contributions of women to the development of educational thought, to the establishment of schools or to the development of new approaches to education;
- * - Barriers to womens' participation in education and their efforts to overcome these barriers;
- * - Cross-cultural and international similarities and differences with regard to barriers to the participation of girls and women in education;
- * - The periodisation of history in womens' perspective (Dark ages, Renaissance, Enlightenment) in view of womens' actual power, autonomy and participation in the economic sphere and in public life in general.

2.3.2. Philosophy of education in relation to the philosophy of a given time or place:

- * The nature of women and men according to the views of famous philosophers. Consequences of these views for the education and upbringing of girls and boys at the time and today;
- * The contribution of women to the development of philosophical thought - feminist philosophy;
- * The philosophical concepts of polarities or dualism [culture/nature, reason/emotion, male/female, essence/matter, individual/community, spirit/flesh, transcendence/immanence]. The attribution of qualities to women and men in this way of thinking. The relative status or value ascribed to these qualities in society;
- * The place and position of women in various religious hierarchical structures (deity - man - woman - nature).

2.3.3. Psychology of education

- * The historical construction of the images of "the feminine" and "the masculine" over time in psychology and their relationship to dominate contemporary views of the nature of women and men;
- * To what extent is the male taken as the norm for human experience in cognition, behaviour, achievement motivation, moral development, deviance etc;
- * The construction of "deficit theories" of women on the basis of findings of sex differences. Social and educational consequences of these conceptions regarding the opportunities for women;
- * Gender differences in learning, motivation, linguistic development, mathematical abilities, maturation, moral and emotional development etc. Theories on causes of these gender differences. Properties attributed to women and men respectively in theories of such differences;
- * The empirical basis for theories on children's development and learning;
- * Feminist scholarship critique on theories of Freud, Erikson, Kohlberg, Piaget, or other dominant figures in psychology.

2.3.4. Sociology of education

- * - The implication of gender in society to be examined in different theoretical perspectives; Symbolic-interactionist perspectives; Structural-functional perspective; Marxist and neo-marxist perspective;
- * -The family as a socialization agent of girls and boys; parents' expectations; parenting roles; household tasks; parent interactions with boys and girls
- * - Nature/nurture controversies on sex-differences; critiques of traditional research in the social and behavioural sciences;
- * -Childhood in other cultures and at other periods of history; the variation in sex-roles or gender across cultures and over historical time;
- * -Youth culture and gender; puberty, adolescent development ;

norms and roles in groups or sub-cultures of youth;

- * - Relationships among girls, among boys and between girls and boys in different stages of development;
- * - Perceptions and expectations of future roles in adult life including sex, family work and leisure ;
- * - The teacher as a product of sex-role socialization;
- * - Teachers' perceptions and expectations of self and others including pupils;
- * - Gender in interactions in the classroom;
- * - Social class, race, ethnic origin as they intersect with gender and shape differing behaviours and expectations by teacher and pupils;
- * - School organisation, power and authority, ritual, classification and framing of educational knowledge;
- * - School as a social institution; gender in relation to positions, roles and norms; stability and change in the social order, discipline and teacher authority;
- * - The hidden curriculum- social interaction in the school; norms for behaviour of girls and boys; discipline, deviance and delinquency;
- * - School rules and organisation; rituals in school - school uniforms or dress codes;
- * - Pupils' participation in school management or decision making; pupil councils, leadership, management and responsibility;
- * - Division of labour in classrooms and schools; male and female teachers as role models for pupils;
- * - Allocation and use of space and resources to boys and girls in schools;
- * - The potential of established sociological theory to the teacher as a tool for promoting equal opportunities.

2.3.5. Curriculum theory and practice (pedagogy and didactics)

- * - The potential of established curriculum theories for promoting gender equity/equal opportunities in schools;
- * - Existing programmes of intervention as a model for intervention on equal opportunities;
- * - Gender in relation to the stating of aims and objectives, assessing the pupil's entering behaviour (social and psychological), selecting and sequencing of subject matter, selecting and using teaching methods, selecting and using learning resources and teaching aids, planning and evaluation of learning outcomes.
- * - The current national and European Community policies on equal opportunities in the curriculum of schools

Section E

TEACHING PRACTICE

1. INTRODUCTION

In the module and in the two pre-service models, it is assumed that teaching practice in schools is a fundamental and essential part of the preparation of the teacher. In order to promote equal opportunities it is essential that the personal development, in formation and skills acquired in the programme are given a place in the criteria for satisfactory completion of teaching practice.

Therefore teacher educators may wish to examine the guidelines and tasks given to students in order to integrate equal opportunities perspectives at all appropriate points, such as the following:

2. AREAS OF SKILLS

2.1. Planning of schemes and lessons

- * - Understanding the academic and personal background of the boys and girls in the class
- * - Incorporating equal opportunities into the aims of schemes and lesson plans
- * - Selecting and sequencing of subject matter
- * - Selecting methodologies
- * - Selecting and designing teaching materials
- * - Design of pupil assessment

2.2. Classroom performance

- * - Establishing classroom climate
- * - Interaction skills; higher cognitive and problem-solving strategies in both mixed and single sex classrooms ; equity and excellence in the distribution of questions to girls and boys in mixed sex classrooms
- * - Classroom management skills
- * - Group organisation in classrooms to promote equal opportunities

2.3. Self-evaluation by the student teacher

- * - Evaluation of teaching practice in accordance with the equal opportunities policies of the Teacher Education institution
- * - Completion and evaluation of observation schedules on gender in classroom interaction

PART II

STRATEGIES FOR IMPLEMENTATION OF CURRICULUM ON EQUAL OPPORTUNITIES IN TEACHER EDUCATION IN MEMBER STATES OF THE EUROPEAN COMMUNITY

Section A

GENERAL STRATEGIES

1. INTRODUCTION

As outlined in the introduction to the curriculum, the purpose of this report is to provide a basic framework curriculum for teacher educators in European member states. The curriculum could be used directly at the initiative of educational authorities or of institutions giving teacher education in each member state.

This framework also becomes the basic reference document in a two-year action-research programme intended to develop and implement curricula in both pre-service and in-service training in all teacher education institutions, in order that the aims of the Resolution of the Council of Ministers can be achieved. (see Appendix A)

There are many common features of the teacher education systems of the European member states. This should enable each state to take advantage of a common framework curriculum in this area. There are however, also considerable differences between systems. This fact calls for a flexible curriculum, like the present, suited to be adopted in different settings.

Both the curriculum and the two year action-research programme are designed to reflect the fact that conditions vary widely from one institution to another and among the member states. Therefore we have gathered relevant information on the position of equal opportunities in teacher education in each member state, and these are included as Appendices to the report.

The overwhelming impression from the National Status Reports is that, while there have been many initiatives on equal opportunities in education generally, the development of curricula on equal opportunities in teacher education in the European Community has been minimal. Therefore this report is an important first phase in the Commission's work of promoting equal opportunities in teacher education and consequently, in all spheres of education.

Furthermore, the responsibility for equal opportunities in teacher education is, in most cases, not clearly located in any one agency. Teacher education institutions enjoy considerable autonomy in the design, teaching and assessment of their programmes of study. Therefore, the Project design which follows is so structured as to permit the creation of a network of teacher educators, representatives of the appropriate agencies and other experts who will oversee the implementation of the curriculum in relation to national and institutional conditions.

2. PRESENT STATUS: BACKGROUND INFORMATION

2.1 Organisation of equal opportunities issues in education within central government.

Most countries have a general agency for promoting equal opportunities in society as a whole (e.g. commissions, councils).

Within the ministries of education, however, there is, according to the national status reports, no evidence of any separate unit with a particular responsibility for equal opportunity issues in any of the member states.

In some countries the responsibility for equal opportunities in education is placed on one particular person.

In some countries educational committees on equal opportunities have been set up by the educational authorities on either a permanent or temporary basis.

There is also evidence of bilateral co-operation with regard to equal opportunities in education, with special emphasis on teacher education. An example of this is Portugal which has entered into a project with Sweden.

2.2. Distribution of responsibility for the content of teacher education

All member states in the European community have passed through or are facing a period of reforms of the structure of teacher education. One feature of these changes has been the integration of teacher training institutions into the mainstream of the university and college system. These changes tend to weaken the central (national) control of the contents of teacher education.

All in all this development means a more decentralised and diversified teacher education regarding structure as well as content.

In-service training is an increasingly important part of teacher education, the structure of which is quite different from that of pre-service in most countries. Strategies for implementing the curriculum in in-service training is consequently included as a separate subsection.

2.2.1. Initial/pre-service teacher education

Most member states do not have detailed curricula for teacher education that are developed centrally or that need approval from central authorities.

The majority of member states have some central framework for teacher education stating what subjects or themes must be included in the teacher education programmes. Several countries have been through or are facing reforms which strengthen the local autonomy with regard to curricula.

In some countries examinations are centrally organised or under central supervision.

2.2.2. In-service teacher education

In all member states there has been an increase in in-service training of teachers in recent years. This increase is partly a response to educational reforms in the school system and the corresponding need for the updating of knowledge among teachers in the workforce. A decrease in the number of students of teaching in many countries has forced colleges and universities to look for new areas of work.

In-service training of teachers plays an increasingly important role in the total sphere of teacher education.

In the majority of member states all in-service training is optional. In a few countries certain parts of the in-service training are compulsory.

In most member states in-service training is offered by colleges for teacher education, universities or by teacher centres with a basis in a region. In most cases one will find a variety of bodies taking initiatives and organising in-service training, such as ministries of education, directorates, inspectorates, local authorities, universities, teacher organisations and special in-service training schools.

In a number of countries in-service training is in some way centrally organised or authorised. This may mean that grants have been earmarked for special areas of national priority, among which information technology, management studies, special education and vocational guidance (counselling) seem to be most frequently mentioned across member states.

2.3. Measures taken regarding equal opportunities in teacher education

The extent to which there is a national policy on equal opportunities in education in general varies greatly among member states. Our reports do not give sufficient detailed information on the matter. We have some reports on schemes and particular activities with regard to equal opportunities in teacher education that have been carried out. There is, however, no evidence of systematic efforts in this field in any of the reports.

3. STRATEGIES

In this section we shall also take advantage of other sources than the national reports from the member states of the European communities. This includes experiences from all parts of Europe.

It is appropriate to distinguish between three main categories of organisations towards which strategies should be applied. Firstly, there are the educational authorities on different levels (central, regional and local). Secondly, there are educational institutions offering teacher education. Thirdly, there are the teachers' organisations.

3.1. Educational authorities

Although individuals engaged in equal opportunities issues make good efforts at introducing gender issues in teacher education, it is nevertheless of vital importance that there is a policy on the part of educational authorities to oblige educational institutions in this area. Such policy statements will be of great assistance to local initiatives to include these matters in the contents of all courses offered. Policy statements could take forms of legislation, ministerial regulations, central guidelines or recommendations. The degree of obligation could range from detailed and compulsory curricula, through general aims common to all institutions, to mere suggestions.

The following proposals are based on methods that have actually been put into operation in some European countries:

- National framework or guidelines for primary and secondary schools could explicitly contain equal opportunities between the sexes as a compulsory theme to be dealt with in several contexts. This puts a pressure also on teacher education institutions to include this topic in order to enable future teachers to treat this in an adequate manner.
- The inclusion of equal opportunities issues in national aims for teacher education has proved to be useful to local efforts to integrate this issue in the curricula. Where appropriate the issue should also be included in national framework curricula or guidelines.
- Extending the statutory obligations of the relevant advisory councils, directorates and regional and local educational authorities to include the promotion of national policies on equal opportunities in relation to pre-service and in-service teacher education.

- Especially in an early phase of working with equal opportunities issues in teacher education there is a need for the earmarking of funds for in-service training of teachers and for teacher educators to build up a nucleus of advisory personnel in school and in teacher education to deal with this issue.

- Systematic routines should develop at national policy level to spread information to key personnel with regard to teacher education, e.g. in ministries, advisory councils, directorates, local authorities, universities and other teacher education institutions. Earmarked funds should be set aside for the implementation of such routines.

- A network of contacts could be built up at all levels of educational authorities to be responsible for reviewing the situation and for proposing appropriate measures, in addition the dissemination of information on relevant matters.

- Lists on people with special competence with regard to equal opportunities issues in the content of teacher education could be made available, both at national and European level.

- A bank of material on equal opportunities and gender issues relevant to teacher education could be established at the national or the regional level or both.

- Innovation approaches are an important area for promoting equal opportunities in teacher education. Action research programmes which include education authorities and institutions from several countries could be a particularly efficient measure. Such a programme could lead to the development of new methods in this field through the exchange of experience and ideas originating from different settings. This could be a great source of knowledge and inspiration to teacher educators both inside and outside the programme. Innovation work of this kind would have spin-off effects also to other fields of teacher education, as equal opportunities issues touch on a broad range of other themes and disciplines.

3.2 Institutions for teacher education

Target groups for the strategies in this section are primarily senior personnel responsible for the various sections or disciplines and other personnel who are actively engaged in promoting equal opportunities in the curricula at their institutions.

- Information on central policies and measures should be disseminated systematically, including information on the machinery available to assist teacher educators in their development of curricula and teaching methods on gender issues. A network of contact people may be considered also at this level.

- The management of each institution/department should inform all working groups engaged in the development of curricula about existing policies on the integration of equal opportunities in teacher education (national and European). The contact persons at each institution could be given the responsibility to provide further information and to see to it that effective routines are established.

- Systematic routines should be developed to integrate the results and perspectives from women's studies into teacher education programmes.

- A list of contact institutions or persons dealing with women's studies should be made available for teacher educators and teachers.

- Teacher educators who wish to develop equal opportunities as part of various curricula at their institutions may on their own initiative establish a network of educators sharing a common interest as to field of work.

- Teacher educators interested in increasing the role of equal opportunities as a topic in in-service training should make proposals of relevant themes or courses to organisers of such courses. Such proposals need to be well prepared and the present framework curriculum could form a basis for the development of such proposals.

3.3. Teachers' organisations

In most member states teachers' organisations have influence on the professional training of teachers by organising courses, taking part in professional discussion and by their dialogue with members, management at the institutions, educational authorities and politicians. Consequently individual members may influence the implementation of equal opportunity policies by working with these issues within their organisation.

Section B

A PROPOSAL FOR AN ACTION RESEARCH PROGRAMME

Recommendations for implementation of the curriculum on equal opportunities in teacher education in European Community member states - Action research programme

1. STRUCTURE OF ACTION RESEARCH PROGRAMME

1.1 Duration

Two years, 1988-1989

1.2 Location

Nationally selected institutions of Teacher Education in each member state of the European Community, to include primary and post-primary, University and non-University, pre-service and in service courses or programmes. It is not intended that the full range of institutions be represented in each country, but that across the member states, there be an adequate representation.

1.3 Personnel

Project Direction : ATEE

Functions:

- * -liaison with nationally initiated projects
- * -co-ordination of meetings and production of reports
- * -liaison with Commission of the European Communities
- * -information bulletins to participating groups
- * -evaluation
- * -preparation of final reports and conference

National Co-ordinators

Professional background:

- * Teacher educators with experiences of implementing equal opportunities issues in teacher education, pre-service or in-service, preferably with experience of European curriculum innovation projects.

Function:

- * -establishing and co-ordinating of national project steering group in each member state.
- * -liaison with Project coordinators and participating institutions and with responsible agencies in each country

National project Steering group

Comprising representatives from each institution or project selected, as well as representatives from an appropriate range of interest groups such as the responsible agencies for equal opportunities in education, Women's Studies scholars, Curriculum

development agencies, Research Institutes, Ministry of Education, inspectorate. The exact composition of the National Project Steering Group would be a matter for the authorities in each member state to decide within the limits of project funding.

Function:

- * to initiate, resource, develop and monitor the implementation of the selected action-research projects in the member states.

The national project steering group would be under the direction of the National Project Co-ordinator

1.4 Timetable of Action Research project

May 1988

Project approval of the Commission of the European Communities by May 1988 including funding provision from Commission of the European Communities and national governments.

Appointment of Project Direction, 1988

June 1988

Selection of National Project Coordinators June 1988.
Issuing of invitations to Barcelona meeting.

September 1988

Meeting to establish project liaison group comprising National Project Coordinators and Project Directors in conjunction with ATEE Annual Conference Venue Barcelona, September 3rd and 4th 1988
Discussion of project in Standing working Group of ATEE at Annual Conference, Barcelona, September 5th to 9th

October 1988

Establishment of National Steering Group in each member state
Invitations to all teacher education institutions to present proposals for small scale projects.

December 1988

Submission of project proposals to Project Directors

January 1989

Decisions on project proposals by Directors

June 1989

Phase one of projects completed by June 1989

September 1989

Implementation of curricula from September 1989 with concurrent evaluation

June 1990

Final reports to Project Directors

October 1990

Submission of final reports to Commission by Evaluators and Directors October 1990 with recommendations for dissemination

December 1990

Conference of EEC and Council of Europe nations December 1990

2. CONTENT OF ACTION RESEARCH PROGRAMME

2.1. Constraints

The project will comprise a number of small scale projects on selected aspects of equal opportunities in the curriculum of Teacher Education. The intention is that participating countries and institutions can develop an area of the curriculum rather than the whole. This acknowledges a number of constraints:

- the availability of expertise in what is an emerging area of scholarship i. e. not every country or institution can at present staff and resource a curriculum on equal opportunities in Teacher Education, whereas each country can provide expertise in some aspects of the field.
- financial constraints are such that a massive programme of curriculum development is not possible in any country, whereas a series of small scale projects which cumulatively constitute a major and comprehensive development are possible.
- the inadequacy of traditional models of research which seek to describe a situation without effecting change; this approach would not be in keeping with the Resolution of the Council of Ministers on equal opportunities for girls and boys in education. Action-research, by contrast, would initiate change which would be the subject of continuous evaluation and emerging understanding.

In addition, the model of action-research is most appropriate to the theme of equal opportunities in that it avoids a prescription of narrow models in what is an area of considerable sensitivity and cultural difference among member states.

2.2. Criteria for selection of projects

2.2.1 Content

The projects selected should contribute to a comprehensive coverage of the issues involved in the curriculum on equal opportunities, as for example:

Development of bibliographies, teaching materials both text and audio-visual, handbooks on equal opportunities for use in teacher education;

Design of general educational theory and practice courses in In service and in Preservice programmes (Pedagogy and didactics, Curriculum Theory, Psychology of Education, History, Philosophy, Sociology, Religion, Teaching practice, Microteaching, etc). Both integrated and autonomous courses on equal opportunities should be considered;

Design of courses in academic studies i.e., equal opportunities in the foundation and inservice courses for teachers in Mathematics, Geography, Physics, Computer Science, Art, Home Economics, Craft, Design and Technology, Languages or any school subject;

Design of courses in the specific educational theory and practice of a given school subject and in the teaching of equal opportunities or Women's Studies as school subjects.

Design of courses for key groups: Inspectors, vocational and career guidance officers, School management, directors of local educational authorities, education officers and curriculum development officers, project advisers etc

Design of Courses for specific target groups of teachers, i.e., kindergarten or pre-school, primary, post-primary (including all age groups in both lower and upper secondary), vocational teachers, vocational trainers, teachers or lecturers in further or higher education, remedial teachers etc;

Design of courses for specific models of Teacher Education i.e., thematic or integrated, discipline based, concurrent or consecutive etc.;

Design of courses in equal opportunities for teachers working in single-sex schools and for teachers working in co-educational schools.

Design of courses for teachers working with special groups such as ethnic minorities, children of migrant workers, specific socio-economic groups etc.;

Design of courses to enable teachers to promote non-traditional subject choices and careers by girls and boys;

The projects must entail aims and rationale, resourcing, methodology, content, and implementation.

2.2.2. Methodology

Each small scale project should conform to the action-research model identified for the Project as a whole. This provides for flexibility in approaches while specifying certain requirements such as the combination of action and development with the analysis of problems. Guidelines would be issued to all teacher education institutions potentially involved in the Project when invitations to present proposals are being issued.

2.2.3. Applicability to other institutions

The projects selected should be such as to contribute to the implementation on a wider scale by all teacher educators in the dissemination phase which follows the two year action-research project.

2.24. Resourcing

Project proposals should be made in the light of a realistic awareness of available funding and existing staff and resources in the participating institutions.

APPENDIX F TIPAM Interaction Analysis Schedule.

THOMOND INTERACTION PROCESS ANALYSIS for MICROTEACHING

		GROUP: DATE: SUBJECT: TEACHER'S NAME: LESSON BEGAN: LESSON ENDED: DURATION: TIME SPENT LECTURING: % TIME SPENT LECTURING:		

INTERACTIONS	CODE	TEACHER-GROUP INTERACTIONS		
		All	Girls	Boys
Lower cognitive question	↓L			
Higher cognitive question	↓H			
Pupil to teacher	↑			
Teacher accepts pupil response	↓✓			
Teacher rejects pupil response	↓X			
Teacher question gets no response	Ⓛ/ⓗ			
Managerial message	↓M			
Negative sanction	↓-			
Positive reinforcement	↓+			
Consecutive interactions	—			

MICROTEACHING

Analysis of Teach 2 and Reteach 2:

Thomond (College) Interaction Process Analysis for Microteaching

TIPAM

Having completed TIPAM for Teach 2 and Reteach 2, you should now

1. Complete Analysis summary for Teach 2 and Reteach 2.
2. Summarise your findings in the comments section; indicating what you have learned from TIPAM about:
 - a) your use of the microteaching skills,
 - b) other aspects of your teaching.
3. Submit this material, with your planning and appraisal forms, to your tutor.

Summary of TIPAM analysis of teach and reteach 2

Name and Group _____

Tutor _____

Completion of Section A will help you to complete Section B. The comments you make about the information you obtained from TIPAM should be based on section B.

Section A

Number of pupils in the lesson

Proportion of pupils who were girls

Number of interactions with boys

Number of interactions with girls

Number of lower cognitive questions to boys

Number of lower cognitive questions to girls

Number of higher cognitive questions to boys

Number of higher cognitive questions to girls

Section B

Proportion of interactions with boys

Proportion of interactions with girls

Proportion of lower cognitive questions to boys

Proportion of lower cognitive questions to girls

Proportion of higher cognitive questions to boys

Proportion of higher cognitive questions to girls

Incidents of probing to lengthen or improve pupil's response

Incidents of praise and encouragement

Number of pupil initiated interactions

Number of questions to the class group

% class time spent lecturing

TEACH 2

RETEACH 2

**APPENDIX G Course evaluation questionnaire: Microteaching
programme in Thomond College of Education.**

MICROTEACHING COURSE EVALUATION

When you have completed your test, we would appreciate your help in evaluating the Microteaching course. The purpose of this questionnaire is to help us to improve the course next year and will not be used for assessment purposes.

Do not write your name on the form as the questionnaire is confidential.

I am a female ☐ male ☐ student in the
PE ☐ R Sc ☐ W & BT ☐ M & ET ☐ programme

Please answer the following by circling one of the numbers from 1 to 4 for each item

1 = I disagree strongly 2 = I disagree
3 = I agree 4 = I agree strongly

- | | | | | |
|----------------------------------------------------------------------|---|---|---|---|
| 1. I found Microteaching useful | 1 | 2 | 3 | 4 |
| 2. I thought the course made reasonable demands on my time | 1 | 2 | 3 | 4 |
| 3. I thought the standard of lecturing was satisfactory | 1 | 2 | 3 | 4 |
| 4. I thought my tutor was helpful | 1 | 2 | 3 | 4 |
| 5. I found the course materials provided adequate | 1 | 2 | 3 | 4 |
| 6. I thought the technical services for the course were satisfactory | 1 | 2 | 3 | 4 |
| 7. I was satisfied with the course structure and organisation | 1 | 2 | 3 | 4 |
| 8. I found TIPAM easy to understand | 1 | 2 | 3 | 4 |
| 9. I found TIPAM easy to apply to my video recordings | 1 | 2 | 3 | 4 |
| 10. TIPAM provided useful information about my teaching | 1 | 2 | 3 | 4 |
-

Thankyou for completing this questionnaire

