

Chapter One

INTRODUCTION

1.1 Background of the Thesis

New Zealand, like most other countries, has introduced legislation to enhance the wage levels of women over the last century. In fact it was New Zealand that took the first, and perhaps largest step towards women's rights by granting women the right to vote in 1893. Nonetheless, issues such as equal pay were considered equally important and were high on the agenda's of women's groups since the early 1890s. Women's rights advocates such as Kate Sheppard, Jessie Mackay and Christina Henderson highlighted the fact that females were frequently being paid less than males, whilst experiencing harsher working conditions. However, Hyman (1994) claimed that unions were more concerned with protecting the jobs of their male members, and tended to include equal pay for women as a strategy if it meant occupations remained predominantly male. Also, employers wanted the freedom to employ women at a lower wage level (pp. 82-3). In 1914 the New Zealand Public Service Association (PSA) introduced the notion of equal pay for equal work as policy. It was not until 1927 that the Labour party adopted the policy as a platform. Yet, during the Depression, the then Labour government turned its back on earlier support for equal pay and instead favoured the concept of the family wage. This led to higher wages for men, regardless of whether men or women had dependents (ibid, pp. 82-3).

Even though the depression severely cut the number of people employed in New Zealand, the number of women that entered the labour force continued to increase. This may have been partly attributable to an added worker effect. However, whilst the Unemployment Act of 1930 made it compulsory for registration with the Labour Department for obtaining government assistance, females and persons aged under 20 were not included in the official figures. Only when the Employment Promotion Act of 1936 was introduced were females over the age of 20 able to register as unemployed and in effect qualify for assistance by the state to find paid work. Further classification of males' and females' wages was apparent when the women's minimum wage rate was set by the court in 1936 at 47 percent of the males' rate (ibid., p. 83).

It was not until the Second World War that the shape of female participation in the work force began to change more dramatically due to the exodus of males fighting overseas. Females took up many jobs in what had originally been predominantly male occupations. By 1945 this led to female labour force participation rates reaching a new high of 29 percent. Despite the upsurge in female participation in the labour force, the

Minimum Wage Act of 1945 set different levels for men and women with the minimum adult rate for men at £5/5 a week, whilst only £3/3 for females. Further legislation created barriers to certain occupations, such as the Apprentices Act of 1948 that excluded females, even though exceptions were made for individual persons or trades (Davies and Jackson, 1993, p. 37).

By the early 1950s, female labour force participation expanded dramatically. Following the setting up of the Council for Equal Pay in 1957, and campaigning led by the PSA during the 1950s, equal pay for women in the public sector was introduced in 1960 (Hyman, 1994, pp. 83-4). During this time New Zealand experienced unprecedented economic expansion and full employment which created demand for female labour. Indeed, between 1945 and 1971 the number of females in the labour force almost doubled (Davies and Jackson, 1993, p. 41). The notion of equal pay that had been ushered in for the public sector a decade earlier was also extended to those in the private sector under the introduction of the Equal Pay Act (EPA) in 1972 (Hyman, 1994, p. 84).

Under the EPA, all awards and agreements had to provide equal pay for women by 1977. The EPA's purpose was to end formal differentials in the pay of male and female workers. However, there was low level policing of the EPA based on complaints. Thus the evasion of the Act's conditions became widespread. All forms of discrimination became unlawful when the Human Rights Commission Act (HRCA) was instigated in 1977. Under this Act, it was against the law to discriminate against an employee on any of numerous grounds, including gender (ibid., pp. 84-5). However, until 1991, any complaint that dealt with the issue of equal pay did not come under the auspices of the HRCA but instead under the EPA. Such complaints were assigned to the Secretary of the Labour Department for consideration. The Department of Labour was the only organisation to have access to confidential wage records (ibid., pp. 139-40).

Still, ongoing problems existed in predominantly female occupations. In 1986, the Clerical Workers Union took a case to the Arbitration Court. They sought a ruling that employers should be ordered to negotiate on a claim for equal pay for work of equal value. The case was declined and further pressure was placed on the EPA when the Campaign for Equal Value, Equal Pay was formed from an amalgamation of female-dominated unions and women's organisations. Pressure from various groups, including female parliamentarians and other private and trade union activists, brought about the Employment Equity Act (EEA) in July of 1990. However, the EEA was short-lived. It was repealed in December by the newly elected National government. Further legislative changes by the newly elected National government were also introduced (ibid., pp. 86-7). This involved the Equal Pay Amendment Act in 1991 that also permitted the Human Rights Commission to act upon a complaint of unequal pay. Also in 1991, the Employment Contracts Act (ECA) was introduced (ibid., p. 140).

The ECA was introduced with the main objective to '*promote an efficient labour market*' (Scollay *et al.*, 1994). Emphasis was placed on collective or individual

employment contracts between employers and employees, rather than a system of negotiations through national awards. Many advocates of women's rights deplored the introduction of the ECA as they viewed it as a system that benefited men yet disadvantaged women. Further, they believed that progress towards the goal of gender equality in terms of earnings had been either too slow or was in fact regressing. They contended that many females were losing gains made in the labour market over recent decades. To rectify this situation, more advantageous policies have been recommended such as affirmative action and comparable worth, thus leading to considerable debate over which direction the current issue of the gender wage gap is heading.

1.2 Objective of the Thesis

There have been a large number of studies published on the issue of the gender wage gap both in New Zealand and overseas. This highly emotive issue has often produced statistics promoting one side or the other that either do not fully explain the current position or are just plain incorrect. Typically, many studies investigating the issue of the gender wage gap centre on the use of a regression model. These aim to identify and determine the impact of the various components, thus 'explaining' any differences in wages males and females receive. Nevertheless, such analyses are subjective in their approach. Results vary depending on the data selected and the choice of variables and functional forms used. These often provide more questions than answers. This is not to say that such analyses do not bring a greater understanding of the issue at hand. Indeed, we will see various studies that have employed such techniques noted throughout this thesis. However these techniques, by reducing the analysis of the study of the gender wage gap down to an individual number, mask a considerable amount of achievement that females may have made in all facets of society. Therefore, the purpose and objective of this thesis is to examine the issue of the gender wage gap within a New Zealand context. Also, this thesis will provide an analysis of possible trends and if the implementation of further policies is required to 'close the gap'. In doing so, this thesis will cover a broad variety of data in analysing the current state of the wage gap in New Zealand

1.3 Structure of the Thesis

The content of this thesis has been organised into four chapters. Chapter 1, as just described, provides a general background of the study, the objective of the thesis, and structure of the thesis. Chapter 2 examines the role of education as a determinant of the gender wage gap. It attempts to address the misconceptions about gender performances that have arisen in recent years. In Chapter 3, we move on to the changing position of males and females in the labour force, along with the issue of parental leave and family responsibilities. Chapter 4 asks two broad questions. Firstly, what are the theoretical reasons for differences in wages between males and females? Secondly, what further policies, if any, are required to eliminate any differences in wages between the genders? This chapter encompasses findings from Chapters 2 and 3 in its attempt to answer both questions. Lastly, Chapter 5 contains a summary and conclusions of the results found.

Chapter Two

THE EDUCATION SECTOR AND THE GENDER WAGE GAP

2.1 Introduction

Every individual brings into the labour market a particular set of acquired skills and abilities, alternatively known as human capital. One way in which a person can acquire a certain level of human capital is through formal education. Formal education has become increasingly important by each passing generation and the skills obtained during school make up a larger component of a person's stock of knowledge.

Formal education can commonly be broken up into three sectors; primary education, secondary education and tertiary education. Regarding the gender wage gap, formal education presents an opportunity for any variances in ability between the sexes to begin to emerge. Issues of schooling have risen in importance over the last decade due to findings by some that schools are short-changing females.¹ If differences are found through subjects chosen, results of examinations or even attitudes towards particular subjects and self-esteem, these may contribute towards explaining income differentials that develop between the sexes. Any analysis of the differences in the performance of males and females within formal education is typically conducted during secondary and tertiary education. Both sectors provide an opportunity for students to select their own subjects and any variation involving academic achievement can be determined through qualifications gained. Therefore, this chapter will examine whether there is evidence of secondary and tertiary education contributing towards the gender wage gap.

2.2 Attendance, Retention and Qualifications by New Zealand Students at Secondary School

Table 2.2.1 shows the census percentage changes of the age/sex cohorts of the New Zealand population for the census years 1966-1996. The table highlights 2 points. Firstly, for the lower age group levels, i.e. those aged 0-44, percentage changes were similar in most cases between the genders right throughout the time period observed. For the age groups of 45+, the differences in percentage change were larger. Secondly, from 1966-1981, there were decreases or only minimal increases in the total number of people in the 0-4 and 5-9 age groups. Beyond 1981, there was a general decrease in the total number within the age groups of 0-24, the increases in the 0-4 age group in the 1986-1991 period and the 5-9 age group in the 1991-1996 period being the main

¹ American Association of University Women (1992) 'How Schools Shortchange Girls: A Study of Major Findings on Girls and Education'.

Table 2.2.1: Percentage Change in Age Group for the Total New Zealand Population, 1966-1996

Age Group	Gender	1966-1971	1971-1976	1976-1981	1981-1986	1986-1991	1991-1996
0-4	Male	-3.2	-0.05	-14.65	-0.44	10.99	1.66
	Female	-2.5	-0.06	-14.71	-1.27	11.92	-0.37
5-9	Male	-3.47	0.05	-6.94	-12.11	-0.65	14.71
	Female	-3.34	0.07	-6.98	-12.14	-1.29	14.66
10-14	Male	13.03	6.21	-4.73	-4.34	-12.38	4.14
	Female	13.59	5.95	-4.29	-4.25	-12.39	2.72
15-19	Male	6.22	15.19	2.70	-2.26	-4.72	-7.95
	Female	6.36	15.45	2.06	-1.44	-4.17	-7.51
20-24	Male	22.64	10.21	5.87	4.49	-3.83	-1.40
	Female	23.86	10.75	4.70	6.29	-2.08	0.6
25-29	Male	11.42	32.81	-4.07	12.34	1.67	-1.09
	Female	12.60	33.21	-1.70	12.54	5.02	0.82
30-34	Male	10.00	19.80	19.35	2.83	10.57	6.46
	Female	13.23	19.56	21.34	4.95	12.35	8.95
35-39	Male	-9.32	16.52	8.14	25.15	2.18	14.27
	Female	-6.06	17.78	10.05	26.13	4.26	16.84
40-44	Male	2.29	-6.43	10.38	12.97	23.71	6.00
	Female	-0.04	-4.73	13.11	13.88	25.01	8.97
45-49	Male	11.91	4.06	-9.76	11.34	12.64	28.54
	Female	6.76	0.29	-7.23	14.69	12.95	29.76
50-54	Male	0.53	13.05	2.47	-6.95	9.19	17.32
	Female	3.51	8.20	-1.77	-4.73	12.47	17.03
55-59	Male	6.23	1.97	11.65	4.19	-8.21	13.91
	Female	10.95	5.56	6.03	0.17	-6.02	16.82
60-64	Male	13.09	9.58	0.15	14.10	4.27	-3.81
	Female	16.54	13.8	3.44	7.00	-0.84	-2.75
65-69	Male	17.09	16.64	7.11	1.61	14.84	8.48
	Female	11.53	18.22	9.3	3.57	7.24	1.80
70-74	Male	16.19	18.85	16.01	9.89	3.33	19.57
	Female	9.31	12.92	17.80	10.94	4.21	10.76
75-79	Male	-7.2	19.03	19.45	17.68	12.76	8.30
	Female	4.34	10.98	14.26	17.99	12.78	8.07
80+	Male	-2.53	-3.22	11.25	25.90	20.96	22.25
	Female	13.28	10.98	15.87	18.82	19.73	19.74

Source: Statistics New Zealand, *New Zealand Census of Population and Dwellings*, 1966-1996.

exceptions. Increases and decreases in total numbers within various age groups tend to be very similar between the genders. Also there has been a general decline in the total number of young persons in the country, although the age group of 0-4 from 1986-1991 and 5-9 from 1991-1996 displayed sizeable increases. However, attendance numbers at

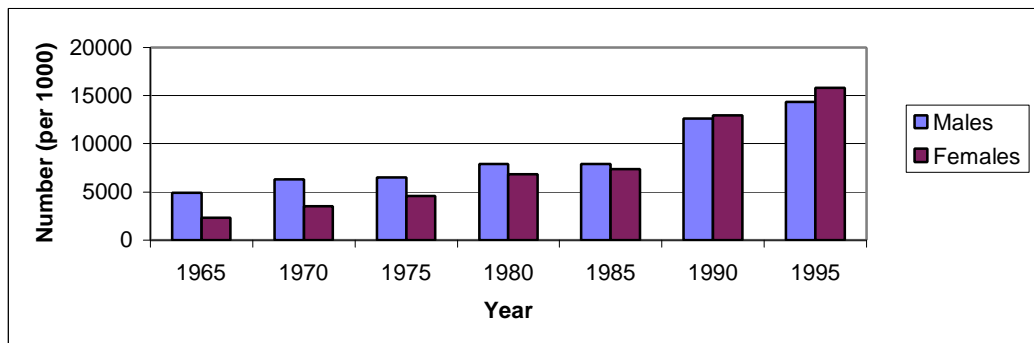
secondary school give a different picture. Table 2.2.2 displays the attendance numbers for males and females at secondary school between 1965 and 1995.² The numbers for years 1 to 4 are quite similar, mainly due to compulsory attendance at school during those years. However, regarding the attendance numbers for fifth year students, during 1965-1970, there were around half as many females in attendance than males. Furthermore, between 1975-1985 this gap closed considerably so that by 1990, more females were in their fifth year than males (Figure 2.2.1). Likewise, a similar pattern has emerged concerning the attendance of students in their sixth year and over (Figure 2.2.2). Therefore, whilst the total number of people within these age groups have decreased from 1981 to 1996 which Table 2.2.1 illustrates, attendance numbers for fifth and sixth year students have increased considerably.

Table 2.2.2: Numbers of Pupils Attending New Zealand Secondary Schools, 1965-1995

Year	Gender	1965	1970	1975	1980	1985	1990	1995
1st Year	Males	26063	28903	33974	31278	32498	27704	27391
	Females	25003	27718	32735	29951	31488	26352	25971
2nd Year	Males	23476	27052	31400	30032	30953	27247	27074
	Females	22528	26013	30647	28957	30568	25857	26012
3rd Year	Males	16961	20761	24879	26609	26761	26386	27136
	Females	16143	20605	24622	26333	26954	25913	27183
4th Year	Males	10510	13164	14647	18113	17004	21319	21349
	Females	9038	11892	15260	19289	18534	22182	23297
5th Year	Males	4948	6289	6490	7930	7866	12628	14350
	Females	2338	3540	4573	6837	7343	12954	15790
6th Year	Males	542	667	389	582	565	860	1009
	Females	83	139	138	435	436	754	1081

Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1995*.

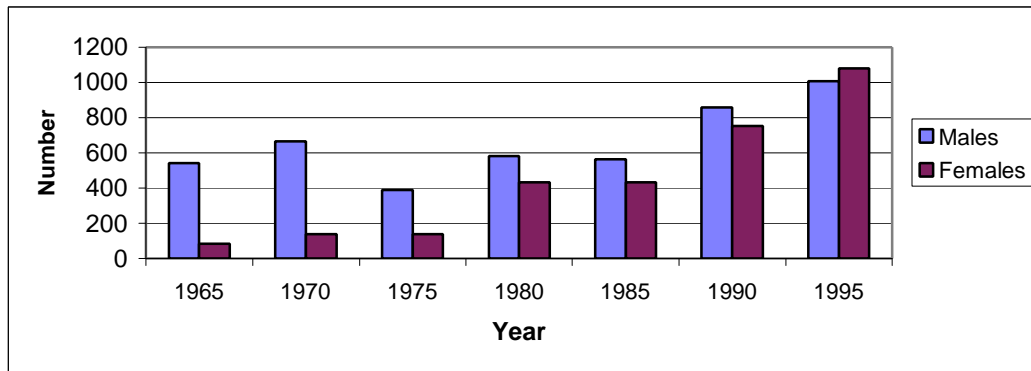
Figure 2.2.1: Attendance of 5th Year Students at New Zealand Secondary Schools, 1965 1995



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1995*.

² In most cases, time series data collated for this thesis only extends back to 1965. Those who completed secondary and tertiary qualifications would now qualify or be placed in senior job positions. Hence, comparisons between the genders currently employed can be made in subsequent chapters.

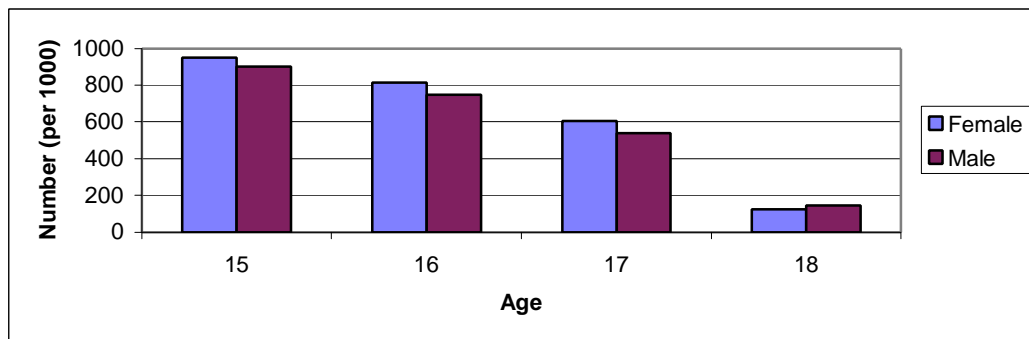
Figure 2.2.2: Attendance of 6th Year and Over Students at New Zealand Secondary Schools, 1965-1995



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1995*.

Comparing more recent data using participation rates, Figure 2.2.3 shows that during 1997, females aged between 15-17 were more likely to stay at school than boys of the same age. At age 18, the reverse was true with female participation rates at secondary school slightly lower than males. Relating these findings to retention rates, the last 12 years have shown a consistent increase in the number of students furthering their secondary education.

Figure 2.2.3: School Participation Rates by Age and Sex in New Zealand, 1997.

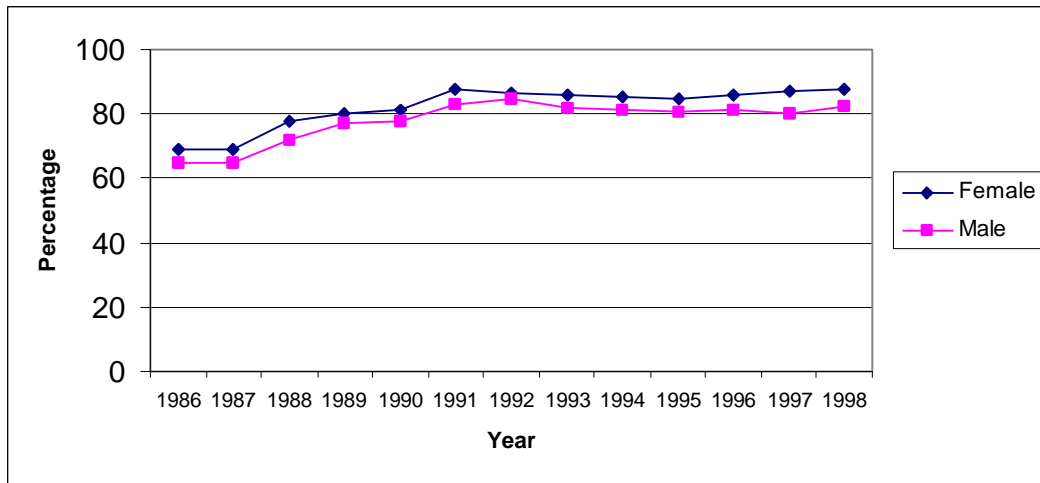


Source: Statistics New Zealand, 1999.

The largest increase in retention rates occurred during the second half of the 1980s. Numbers of females staying at school to the age of 16 had increased from 69.3 percent in 1986 to 88.6 percent in 1998 (Figure 2.2.4). Similarly, retention rates up to the age of 17 almost doubled from 32.8 percent in 1986 to 65.2 percent in 1998 (Figure 2.2.5). Yet, as illustrated by Figure 2.2.3 which shows lower participation rates for 18 year old girls, only 15.2 percent of females stayed at school through to the age of 18 compared with 17 percent of males in 1998 (Figure 2.2.6). Statistics New Zealand (1998) noted that raising the leaving age to 16 in 1993 did little to change the retention rates for students' (p. 58). Furthermore, any causes of fluctuations in retention rates have not

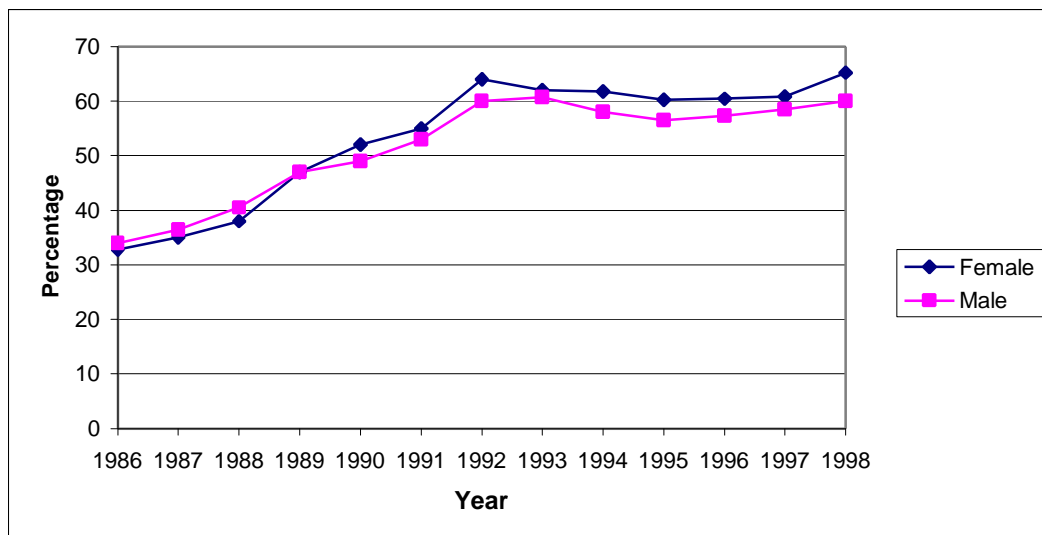
been easily explained. One reason could be the number of exemptions for leaving school early that has increased significantly over recent years. This may be influenced by tertiary institutions such as polytechnics competing for secondary school students. Alternatively, the increasing costs of higher education may mean the incentive to gain higher qualifications to further education at a tertiary level have declined, thus causing students to leave secondary school at a younger age. However, those effects may be mitigated by the increasing need for qualifications when attempting to enter the work force.

Figure 2.2.4: Retention Rates for 14-16 Year Olds in New Zealand, 1986-1998



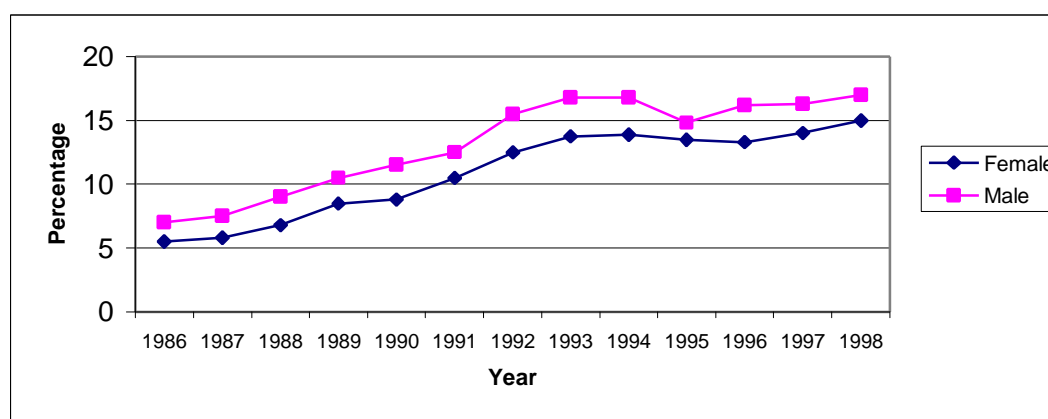
Source: Statistics New Zealand, 1999.

Figure 2.2.5: Retention Rates for 14-17 Year Olds in New Zealand, 1986-1998



Source: Statistics New Zealand, 1999.

Figure 2.2.6: Retention Rates for 14-18 Year Olds in New Zealand, 1986-1998



Source: Statistics New Zealand, 1999.

Nevertheless, findings of data involving highest attainment of school leavers by gender provide interesting comparisons. Large increases were observed in the late 1980s, and early 1990s, with slower changes since then. Table 2.2.3 shows the percentage of the highest attainment of school leavers by gender for 1987, 1993 and 1997. Those with no qualifications dropped between 1987-1993 but increased slightly by 1997, with males having the highest numbers for each year. When considering students with school certificate as their highest qualification, females had a higher percentage in 1987, but this has reversed with a growing gap between the genders (17.7 percent for males in 1997 compared to 14.9 percent for females). Sixth form certificate has experienced a more consistent trend whereby females have a higher percentage throughout the three years observed. Significantly, the gap between males and females having a seventh form qualification as their highest qualification has increased from a gap favouring males of only 0.4 percent in 1987 to a gap favouring females of 6.8 percent in 1997. Indeed, this gap is the largest of all comparisons within the table.

Table 2.2.3: Highest Attainment of School Leavers by Gender, 1987-1997

Type of Qualification	1987		1993		1997	
	Male%	Female%	Male%	Female%	Male%	Female%
Seventh Form Qualification ¹	24.8	24.4	35.5	39.7	38.8	45.6
Sixth Form Certificate ²	25.3	29.5	27.4	28.8	23.7	24.2
School Certificate ²	25.7	26.1	19.7	17.2	17.7	14.9
No Qualification	24.2	20	17.4	14.4	19.8	15.3

¹ Includes University Bursaries/Scholarship, Entrance Qualification or Higher School Certificate.

² One or more subjects irrespective of grade awarded.

Source: Adapted from Table 47, Ministry of Education, 1997.

Table 2.2.4: Percentage of Sitting Students Awarded Higher Grades in New Zealand, 1997

Qualification	Male (%)	Female (%)
School Certificate Papers Graded A or B	26.6	32.0
Sixth Form Certificate Papers Graded 1, 2, or 3	18.5	23.0
Bursaries/Scholarship Papers Graded S, A, or B	40.0	42.0

Source: Adapted from Table 43, Ministry of Education, 1997.

Relating this to participation and retention rates, it was previously mentioned that a higher number of males stayed at school through to the age of 18; yet females had a greater success in leaving school with a higher qualification. This could be due to two reasons. Firstly, males may be staying at school until 18 but may only be completing a lesser qualification due to prior failure in subjects in previous years, or deciding to study various qualification levels. Hence, more females than males in their last year are sitting their seventh form qualification. Secondly, it could be due to females simply having a higher pass rate than males when attempting their seventh form qualification. However, as far as university bursaries/entrance scholarship papers graded S, A, or B are concerned, in 1997, Table 2.2.4 shows that passing rates of males and females were very similar with 40 percent for males compared to 42 percent of female. Therefore, it would seem that females in their last year of secondary school are more inclined to sit a seventh form qualification, whilst males tend to study at a range of levels.

There has been some study whether there is a difference in the choice of subjects taken by students in single-sex schools as opposed to co-educational schools. Horsfield (1988) examined data involving both co-educational and single-sex schools enrolments in non-traditional subjects during 1985. The author found that overall, differences were minimal. The author found that females were more inclined to take science subjects and economics in single sex rather than co-educational schools. In contrast, female students attending co-educational schools were more inclined to take technical subjects, applied mathematics and accountancy (p. 161). The Department of Education (1986) outlined two reasons for any discrepancies in enrolment numbers. Firstly, single-sex schools may lack suitable facilities and resources to provide adequate teaching of particular subjects, such as woodwork and metalwork. Secondly, pupils from single-sex schools tend to come from more affluent backgrounds whilst students from co-educational schools come from a wider range of economic situations (p. 58). Hence, we may find that more pupils are enrolled in manual subjects at co-educational schools, whilst single-sex enrolments could focus more on academic topics.

Overall, the structure of gender participation during the senior years at secondary schools has changed considerably over the last 30 years. There has been a considerable improvement in the number of females remaining at secondary school in the higher years from 1965-1980. From 1980-1995 higher year numbers have increased for both genders. Data over the last 15 years show that females now lead males in attendance, retention and the top qualifications. More importantly, Table 2.2.2 showed that during

1965, and to a similar extent in 1970, female attendance at the highest level at secondary school was well below that of males. If there is increasing female participation over the last two decades, it is important to address what subjects females are entering into.

2.3 Subjects of Study

Section 2.2 showed the overall numbers of males and females that attended and attained various levels of qualifications at secondary school. There are a variety of subjects in which students can enrol to attain such qualifications. The differences in subjects students enter are more pronounced at a fifth, sixth and seventh form level as students are given the opportunity of choosing from a wide range of subjects.

Table 2.2.1 shows that from 1986 onwards, there was a decline in the number in the 15-19 age group. However, Tables 2.3.1 to 2.3.3 show there was an increase in enrolments for many subjects from 1985-1990. There has certainly been an emphasis on the requirement of students to gain higher levels of qualifications in recent years. This impacted on students by increasing the duration of school attendance. This may be one reason for the increased number of students in most subjects. Nevertheless, some subjects have experienced a decline in numbers. There have been some large falls for the fifth form level. From 1965-1990, the sciences of biology, chemistry and physics had all decreased in attendance. French, geography, history and woodwork also experienced a decline in attendance. Again, French and music attendance dropped considerably during the sixth form. Music was the only subject to suffer a decrease in attendance at the seventh form level from 1965-1990. The main areas of growth at the fifth form level have been accountancy; art; English; horticulture; mathematics; science and technology, and typewriting. At the sixth form level it has been accountancy; agriculture/horticulture; art; economics; English; home economics; mathematics; physics, and typewriting. For the seventh form level all subjects other than music; French, and German showed large increases in attendance numbers.

Table 2.3.1: Subjects Taken by All New Zealand Secondary School Students in Form Five at 1 July, 1965, 1970, 1975, 1980, 1985 and 1990

Subject	Gender	1965	1970	1975	1980	1985	1990
Accountancy	Males	n.a	n.a	33	75	5176	6053
	Females	n.a	n.a	15	93	5013	5904
Agriculture/ Horticulture	Males	656	338	484	575	842	790
	Females	3	3	60	89	213	204
Art ¹	Males	1058	1720	4406	4754	3975	4964
	Females	1917	2049	5392	5012	3936	5490
Biology	Males	3444	3140	3994	3686	2623	1555
	Females	7125	9031	10514	7916	4673	1981
Chemistry	Males	2509	2073	1634	1266	1137	984
	Females	756	659	337	364	389	268

(Table 2.3.1 continued)

Subject	Gender	1965	1970	1975	1980	1985	1990
Economics ²	Males	n.a	n.a	60	6555	7274	7119
	Females	n.a	n.a	34	6334	7710	6211
English	Males	18154	20714	28129	31149	30007	30653
	Females	16357	19735	27842	30741	30097	29525
French	Males	3658	3516	2602	1523	1277	948
	Females	5916	6202	5469	3798	3320	2870
Geography	Males	11330	12684	16088	14902	12318	10715
	Females	12968	15517	20481	15895	12804	10201
German	Males	124	231	336	447	436	372
	Females	145	404	761	867	1008	1019
Technical Drawing ³	Males	6492	8792	12305	12575	10335	8304
	Females	1625	1819	977	607	1042	1327
History	Males	5920	5434	6228	5701	4204	4505
	Females	6794	7314	8889	7340	5412	5957
Home Economics	Males	n/a	21	212	758	1398	2027
	Females	2108	2042	3510	5438	6106	5681
Horticulture	Males	213	73	n.a	116	2361	2411
	Females	70	11	n.a	55	1494	1181
Human/Social Biology	Males	58	59	88	506	680	759
	Females	1130	500	626	1252	1911	1665
Mathematics	Males	14228	17660	25648	28085	29188	28917
	Females	6455	9578	17839	25133	28473	27536
Music ⁴	Males	15753	13218	7109	2545	1125	1416
	Females	5571	13938	8566	3291	1255	1843
Physics	Males	2559	2181	1881	2182	1808	1820
	Females	234	306	178	350	194	318
Science and Technology	Males	10193	13484	20092	22469	21174	21665
	Females	6327	9272	13919	16964	19275	19609
Typewriting	Males	65	62	163	307	460	700
	Females	1583	4459	8797	13312	12912	11157
Woodwork	Males	2987	3299	5298	5536	4623	1868
	Females	0	11	62	102	171	132
Totals	Males	99401	108699	136790	145712	142421	138545
	Females	77084	102850	134268	144953	147408	140079

¹ Encompasses all Art subjects (Art, Art (Core), Art and Craft, Art Practical, Fine Art Preliminary and History of Art).

² Encompasses Economics and Economic Studies.

³ Encompasses Graphics.

⁴ Encompasses all music subjects (Music (Core), Music (Full), Music (General), and Music (Special)).

Sources: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

Table 2.3.2: Subjects Taken by All New Zealand Secondary School Students in Form, 1965, 1970, 1975, 1980, 1985 and 1990

Subject	Gender	1965	1970	1975	1980	1985	1990
Accountancy	Males	212	304	3150	3325	4223	4714
	Females	24	193	2436	3422	4555	4820
Agriculture/Horticulture	Males	11	12	28	55	114	512
	Females	0	0	11	10	42	189
Art ¹	Males	183	742	1456	1580	1545	2794
	Females	379	764	2723	3547	2991	4020
Biology	Males	3167	5104	8009	7987	6749	5369
	Females	3505	6070	10785	12546	11036	8639
Chemistry	Males	3559	5000	5523	6005	5547	4872
	Females	1157	2084	2938	4371	4966	4291
Economics	Males	1	34	295	4519	5348	4687
	Females	0	15	152	4715	5604	3968
English	Males	6527	10161	13705	16288	16206	20121
	Females	4839	8276	13737	17322	17740	21228
French	Males	1049	908	628	476	448	337
	Females	2258	2678	231	1695	1444	1397
Geography	Males	2938	4788	7032	6562	5603	5414
	Females	3144	5333	8566	8447	6372	4775
German	Males	269	260	193	211	218	207
	Females	624	857	831	744	661	660
Technical Drawing	Males	528	1590	2704	4077	3620	3874
	Females	127	383	121	237	290	732
History	Males	2137	3014	3652	3175	2555	2548
	Females	2682	3937	5700	4970	3315	3303
Home Economics	Males	0	3	16	86	162	658
	Females	30	157	549	755	853	2575
Horticulture	Males	0	0	n.a	14	253	780
	Females	0	0	n.a	20	278	472
Mathematics	Males	5542	7996	11448	14221	13880	17008
	Females	1795	3561	7751	11401	12497	14708
Music ²	Males	3285	3546	1440	900	478	883
	Females	2607	2864	1903	1335	526	1086
Physics	Males	3366	5016	6859	8033	7748	7783
	Females	546	1123	1925	2679	2998	3036
Typewriting	Males	56	68	54	96	68	241
	Females	390	985	1942	3398	3158	4278
Woodwork	Males	39	57	176	154	62	196
	Females	0	7	15	4	2	28
Totals	Males	32869	48603	66368	77764	74827	82998
	Females	24107	39287	62316	81618	79328	84205

Note: Figures for 1965 are without University Entrance.

¹ Encompasses all Art subjects (Art, Art (Core), Art and Craft, Art Practical, Fine Art Preliminary and History of Art).

² Encompasses all music subjects (Music (Core), Music (Full), Music (General), and Music (Special)).

Sources Ministry of Education, *Education Statistics of New Zealand*, 1965-1990.

Table 2.3.3: Subjects Taken by All New Zealand Secondary School Students in Form Seven at 1 July, 1965, 1970, 1975, 1980, 1985 and 1990

Subject	Gender	1965	1970	1975	1980	1985	1990
Accountancy	Males	216	153	697	951	1556	2733
	Females	22	15	203	455	961	2036
Art ¹	Males	22	119	325	485	533	2130
	Females	38	142	475	1072	1144	4001
Biology	Males	801	1290	2224	2564	2160	3116
	Females	491	1003	1933	2836	2925	4842
Chemistry	Males	1465	1965	2490	2810	2623	3114
	Females	376	641	1050	1599	1976	2392
Economics	Males	22	82	1481	1854	2449	3775
	Females	2	8	621	1300	1745	3552
English	Males	2164	2951	3993	4170	3806	7129
	Females	903	1596	2766	3921	4267	9964
French	Males	366	407	292	202	202	240
	Females	486	743	697	681	601	840
Geography	Males	552	869	1422	1594	1708	3684
	Females	372	761	1327	1775	1642	3827
German	Males	156	125	77	98	92	82
	Females	183	286	288	309	257	358
Technical Drawing	Males	26	21	9	23	61	325
	Females	2	15	4	2	1	110
History	Males	558	761	1089	1171	1248	2492
	Females	423	770	1257	1668	1600	3378
Mathematics ²	Males	1661	3470	3674	7015	7601	11696
	Females	435	982	1719	3567	4714	8735
Music ³	Males	1020	819	1903	183	85	198
	Females	415	509	300	242	188	366
Physics	Males	1439	1846	2519	3034	2875	4137
	Females	271	458	770	962	1164	1474
Typewriting	Males	2	10	0	24	n.a	64
	Females	46	51	34	84	n.a	500
Totals	Males	10470	14888	22195	26178	26999	44915
	Females	4465	7980	13444	20473	23185	46375

Note: Figures for 1965 are with University Entrance.

¹ Encompasses all Art subjects (Art, Art (Core), Art and Craft, Art Practical, Fine Art Preliminary and History of Art).

² Encompasses all Mathematical subjects (Applied Mathematics, Mathematics and Mathematics with Statistics).

³ Encompasses all Music subjects (Music (Core), Music (Full), Music (General) and Music (Special)).

Sources: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

Looking more specifically at the subjects males and females have entered into, we see that there are some subjects that have continued to be predominantly entered by one gender. Furthermore, others have increasingly experienced similar gender participation. Regarding accountancy and economics, similar numbers were enrolled throughout the years at a fifth form level. At the sixth form level, the gender gap during the 1960s and 1970s was slightly larger, but this has closed in recent years to near parity. By seventh form, especially during the 1960s and 1970s, female enrolments in accountancy and economics were minimal. Notwithstanding the fact that male enrolments in these subjects were also low, there was a considerable gender difference. So much so that in 1965, 22 females were enrolled in accountancy compared to 216 males, a female/male ratio of around 10 to 1. For the given year, the male/female ratio for economics was also around 10 to 1 with 22 males and 2 females. By 1970, the ratio for accountancy and economics was similar with 153 males and 15 females; and 82 males and 8 females. Both of these produced a ratio of almost 10 to 1.

Females have generally dominated art, although the greatest difference in numbers has consistently been at the sixth form level. Also, females have predominantly entered music but only in recent years. There are clear gender preferences with respect to the various science curricula available. Greater numbers of females than males have been enrolled in biology and human biology between fifth and seventh form; whilst the reverse has occurred for physics. Chemistry has experienced a convergence of females over males, especially with each passing year group. Mathematics has certainly experienced a change in gender numbers during fifth and sixth form. From 1965-1970 there were around half as many girls as boys taking mathematics, yet the difference has closed significantly from 1975 onwards. Still, at the seventh form level, a gap has persisted between the sexes, although this gap is not as pronounced in later years. There have been very few differences in English enrolment numbers between the genders. The exception being at the seventh form level when English became optional. At this level, this subject was slightly favoured by females. Females dominate languages such as French and German, particularly at the seventh form level. Likewise, history and geography are again slightly preferred by females. Males dominate graphics/technical drawing and woodwork, whilst home economics has consistently remained the domain of females, although there has been a large increase in male participation. In other subjects that are largely fifth and sixth form topics, typing has been clearly the domain of females with agriculture and horticulture predominantly male orientated. However, one has to bear in mind when considering differences over time is that the earlier male domination of particular subjects was probably due to the higher male retention rates from 5th to 7th form.

These three tables highlight several important factors. Clearly, throughout the senior years of secondary school, there are subjects that have been and continue to be dominated by one gender. For males, subjects such as graphics, manual trades, physics, chemistry and mathematics dominate. Females tend to dominate the arts, music, languages, social studies, English and biology. Yet clear divisions in subjects by gender have been blurred somewhat over the last 15 years. Most subjects have experienced some type of convergence. One such example has been business topics

whereby enrolment numbers in accountancy and economics are relatively similar, in direct contrast to numbers enrolled during the 1960s and 1970s. It is interesting to note that throughout 1965-1995, females studied a greater range of subjects than their male counterparts. Female students chose art, music or a foreign language more than males did. Males on the other hand tended to choose more core subjects and electives that involved some type of manual or technological appreciation.

Furthermore, students' perception of particular subjects may play a large part in whether they are dominated by one gender. Weinreich-Haste (1979, 1981) (Colley, 1998) asked 13 and 14 year old students to rate subjects on various scales. Both males and females perceived mathematics and science subjects as the most masculine of all subjects available, whilst cookery and typing the most feminine. They found that there was a strong correlation between masculine subjects and the notion of them being difficult, interesting, useful, complicated, involving thoughts and about-things. Conversely, feminine subjects were seen as being easy, boring, useless, simple, involving feelings and about-people (p. 23).

2.3.1 Mathematics and Science Studies

With reference to subject performances between males and females, recent studies conducted internationally have focussed on gender differences in achievement concerning mathematics and science subjects. In 1994/95 the Third International Mathematics and Science Study (TIMSS), coordinated by the International Association for the Evaluation of Educational Achievement, assessed the knowledge and skills of New Zealand students in mathematics and science. Three age groups were looked at: standards two and three, forms two and three; and forms six and seven. Standards two and three showed no significant differences overall between boys and girls regarding mathematics. This was also found for forms two and three, though there were differences evident, favouring boys, on many items by form three. By form six and seven, numeracy scores for mathematics had males significantly higher than for females (536 compared with 507). However, this gap was smaller than for most other countries surveyed (Ministry of Education, 1997, pp. 73-4).

The Ministry of Education (1996) found the difference in science achievement between male and females was negligible at the primary school level. Nevertheless, this increased markedly to the detriment of girls by the start of their secondary schooling. A vast proportion of girls, especially those in forms two and three, tended to develop negative views towards science and mathematics subjects. They often disregarded them as less important to their future. The only area in which girls outperformed boys during form three was human biology. Similarly, a literature investigation by Colley (1998) concerning female participation in mathematics and science, found that physical sciences were perceived as complex and abstract. Biology, on the other hand, was not stereotyped as masculine as it dealt with living organisms instead of abstract laws and formulae. Only the latter were associated with masculinity. By forms six and seven, the TIMSS found higher competency scores in science for males than females (543 compared with 515) (Ministry of Education, 1997, p. 75).

Table 2.3.4: Percentage of Year 3 School Certificate Students Gaining A or B Grades in Selected Subjects, 1996.

Subject	Male(%)	Female(%)
English	17.2	32.2
Mathematics	36.8	34.7
Science	30.4	32.5
All Papers	27.5	33.5

Source: Adapted from Table 36, Ministry of Education, 1996.

Table 2.3.5: New Zealand University Bursaries/Entrance Scholarship Examinations: Percentage of Papers Graded S, A or B in Selected Subjects, 1997.

Subject	Participation		Attainment	
	Male (%)	Female (%)	Male (%)	Female (%)
Accounting	15.0	13.4	46.5	38.3
Biology	26.7	37.5	40.1	40.9
Chemistry	26.2	20.7	52.3	50.2
Classical Studies	11.0	18.9	37.0	42.3
Economics	24.2	19.5	41.9	36.8
English	45.3	63.1	32.5	44.3
Geography	25.9	27.8	32.0	36.4
Graphics	11.1	3.1	30.6	32.1
History	9.4	14.2	41.6	39.6
Mathematics (Calculus)	39.8	25.9	46.3	48.1
Mathematics (Statistics)	50.4	40.6	44.6	40.6
Photography	5.3	10.0	28.4	35.9
Physical Education	17.0	13.2	19.1	29.9
Physics	32.8	14.7	52.1	55.6
Te Reo Rangatira	1.8	2.9	46.1	42.2

Source: Adapted from Figure 4.9, Statistics New Zealand, 1998.

If a significant difference existed between males and females in the areas of mathematics and science, exam results would show a similar trend. However, this is not the case. Looking at Tables 2.3.4 and 2.3.5, showing higher grades for School Certificate and New Zealand University Bursaries/Entrance Scholarship Examinations respectively, we can see that grades in these subjects were similar. With School Certificate, boys were marginally better than girls in mathematics. Females slightly outperformed males in science. With University Bursaries/Entrance Scholarship Examinations, males were ahead in chemistry and statistics, whilst females did better in biology, calculus and physics.

Gender comparisons of subjects may be seen as an opportunity to highlight the notion of sex differences in intelligence. According to Halpern (1997), “*there are many cognitive areas in which the sexes, on average, differ, and many in which there are no differences ... some of the differences favour females and some favour males*” (p. 1092). What the author found dangerous was the notion of a smarter sex that has often been extracted from data showing grade differences.³

2.3.2 Standardised Tests

Stricker, Rock and Burton (1993) documented that in the U.S., overall results from standardised tests such as the Scholastic Aptitude Test (SAT) differed from actual grades obtained. This may distort what the real abilities of both genders in various subjects were. The authors contended that males achieved higher grades in such tests; yet females, on average, got higher grades. In New Zealand, the Ministry of Education (1997) highlighted the results from the TIMSS for mathematics and science. Males consistently outperformed females in the study over the various age groups, with some of the largest variation during forms six and seven. Nevertheless, Table 2.3.5 clearly shows that for University Bursary/Entrance Examinations, females receive better grades. This is demonstrated by females outperforming males in mathematics with statistics, and achieving more of the higher grade levels than males in three of the five science topics available.

Further to the use of standardised tests, a common finding, as exemplified by M. and D. Sadker (1990), was that males scored higher than females in all subsections of the SAT. This was despite girls starting out ahead of boys in most academic areas. Yet, others have questioned these claims. The NOW Legal Defence and Education Service (1986) noted that the educational testing service admitted the SAT under-predicted the grade females could expect to obtain in college. Smithson (1990) stated that despite “*the repeatedly demonstrated lack of correlation between women’s performance in classwork and their scoring on the Scholastic Aptitude Test, admission boards continue to use SAT scores*” (p. 2). The SAT, like the TIMSS in New Zealand, rated boys further ahead of girls in mathematics during their more senior years at school. Moreover, like the TIMSS, girls got higher grades in mathematics than their test scores predicted, such as those obtained by females in their first year of college (Anonymous, 1999). Clearly, caution has to be taken with various methods of assessment. It may be the case that SAT scores are inaccurate, or that they are correct whilst exam results are inaccurate. Alternatively, both may be inaccurate.

There has also been considerable interest in the objective of eliminating gender differences in performances concerning various subjects. New Zealand’s Ministry of Education senior research manager Hans Wagemaker claimed that better qualified teachers who could deliver the curriculum were required to enhance the performance of

³ Halpern (1997) summed up the conclusions of multiple studies with the fact that “*females, on average, score higher on tasks that require rapid access to and use of ... semantic information in long-term memory, production and comprehension of complex prose ... males, on average, score higher on tasks that require transformation in visual spatial working memory ... and fluid reasoning, especially in abstract mathematical and scientific domains*” (p.1091).

females (Fowler, 1997, p. 2). Others disagree. Halpern (1997) argued that any problems with female under-achievement in subjects such as mathematics and science were based on their attitude rather than teaching ability. Evidence of this was found when girls began secondary school that they tended to grow negative views towards maths and science subjects, or disregarded it as less important to their future. Hence, the author contended that any curriculum change should center on the idea of convincing females that mathematics and science are important, and that they should make academic and career choices that were math-wise (p. 1098).

Colley (1998) noted that the apparent lack of recruitment of females in matters of science and technology had overshadowed the ineffective recruitment of males to modern languages. This may be important, as communication across national and language boundaries is essential to a global economy. However, the author conceded that such skills might be less essential than those associated with other main professions (pp. 31, 33). Kleinfeld (1997) contended that in the U.S., African-American boys had drastically fallen behind other groups in most academic tests and qualifications. However, there had been relatively little concern expressed by advocates of those who believed girls were the general group who were the most disadvantaged. Overall, there has been little concern expressed about the possible disadvantages for males of the effects of academic gender stereotyping.

2.4 Classroom Participation

Some contemporary writers on the subject of student performance have focussed on the idea of gender differences in classroom participation as a means to explain differences within subjects. Classroom participation has been seen as a way of observing how the genders interact and whether any patterns result. Research conducted over many years by D. and M. Sadker found that within primary and secondary schools, males called out eight times more than female students did. There was a distinction in reaction by the teacher with boys often being heard whilst girls were corrected for improper behaviour (American Association of University Women (AAUW), 1992, p. 68). The idea of a clear difference in classroom participation between males and females was emphasised by the AAUW as one of the prime reasons for the under-achievement of girls at school. However, further evidence of differences in attention is sparse. Instead, research by others found that gender difference in classroom participation was small and inconsistent, with results often favouring girls over boys. An overview of such studies by Lindow *et al.* (1985) found that teachers did give more attention to males than females. However, this attention was actually negative, being managerial; often disciplinary, in its intent (p. 3).

Furthermore, as Kleinfeld (1998) noted, the whole idea of classroom participation as a viable reason for schools short-changing girls “contains a tangle of murky issues” (p. 19). Kleinfeld identified four areas of classroom participation that seemed questionable. Firstly, would differences in teacher attention influence how students learn? No research has shown the positive correlation between student attention and achievement. Secondly, there are problems in trying to determine the meaning of getting attention in class. Questions asked by teachers can come in many forms and

achieve various purposes. A teacher may ask a question to get a student back on task. Thirdly, a comprehensive study of classroom interaction in different classrooms, in different subjects and in different locales has yet to be conducted. To obtain an overall indication of what occurs in various classrooms in particular subjects, researchers would need to tabulate classroom activities over many hours. Lastly, studies are often conducted in classes where females are at a disadvantage (ibid., p. 19). Studies such as those in law where an aggressive style of questioning is encouraged tend to favour males. Classroom interactions in subjects in which females excel, such as foreign languages and English, are rarely investigated.

Also, some classes tend to be dominated by a few students as far as general discussion and interaction in class is concerned. Tobin and Garnett (1987) found that such students, commonly referred to as 'target' students, were predominantly male in science classes. Overall though, female 'target' students averaged more interactions per class session than male 'target' students did over the range of subjects' available. Notwithstanding issues such as personalities in particular classes, classroom rules, teaching methods and subject matter, all contributed to the varying complexities of classroom life. Overall, no strong pattern emerges from the notion of classroom participation affecting gender performance. Instead, studies show that some favour males and others favour females.

2.5 Issue of Self Esteem

Another issue highlighted by the AAUW (1992) was that girls had lower self-esteem than boys. Whether there is a connection between confidence and vitality lost during adolescence and what happened to them at school has been difficult to prove. Kleinfeld (1998) conducted a literature search on self-esteem and revealed three points. Firstly, like classroom participation, self-esteem was very difficult to measure as different studies define esteem concepts in different ways (p. 23). Research by the AAUW (1992) used multiple statements of opinion. Yet Kleinfeld (1998) argued that modesty issues might have prevented students from choosing high opinions of themselves.

Secondly, Kleinfeld found that self-esteem differed not only between boys and girls but also between ethnic groups (ibid., p. 23). The one group that tended to be at the bottom of most educational surveys, yet scored the highest level of self-belief and esteem, were African-American adolescents, particularly males. This had been the result of numerous studies (Tashakkori and Thompson, 1991; Wade, Thompson, Tashakkori and Valente, 1989). Significantly, academic achievement and self-concept did not seem to be important with African-Americans. Instead, it was found to do more with issues such as attractiveness, popularity, appearance, physical strength and bravado. Inferences of low female esteem leading to poor academic performance is therefore difficult if groups with the best self-esteem have the worst academic performance. Tashakkori (1992) concluded that two different individuals could have the same level of self-esteem, while their self-beliefs were completely different. Also, competence in one school subject or in a non-academic area might have compensated for self-unfavourable beliefs in another area (p. 486).

Finally, reported self-esteem differences between the genders were mostly small. Some studies did show self esteem in favour of boys. Work by Dukes and Martinez (1994) and Chubb, Fertman and Ross (1997) showed that any deviations could be explained by the tendency of boys to choose extreme response categories on multiple-choice questions. This problem has also been extended to more comprehensive studies such as Schoen *et al.* (1997). When the categories of opinions were aggregated, no significant difference was found. Furthermore, Kleinfeld (1998) noted that it might have had more to do with dissatisfaction of physical appearance than schools eroding females' self-confidence (p. 25). Kleinfeld noted that the AAUW (1992) report that implied that schools were to blame ironically claimed that evaluations of personal appearance correlated strongly with general statements of self-esteem. Other assessments including academic performance, relationships with peers and family, and feelings of importance were less relevant (p. 25).

Significantly, more comprehensive work flatly contradicts the results of the AAUW and similar studies. Lee, Chen and Smerdon (1996) examined a sample of over 9000 students in nearly 400 schools, whilst Harris (1997) explored a Metropolitan Life survey which involved a group of over 1000 teachers and students. Both studies showed that within the school climate, low self-esteem was generally a shared gender problem, and if anything, was less prevalent in girls than boys. Therefore, there are similar difficulties with comparing the genders in issues of self-esteem as there were with classroom participation in association with the academic performance of students.

2.6 Secondary School Education - Some Conclusions

Presently, upon completion of their secondary school education, females are leaving more qualified than their male counterparts. The increased participation of females over recent decades has in turn meant that more girls have enrolled in subjects that were traditionally dominated by males. Also, despite findings such as the TIMSS that girls lag behind boys in science and mathematics, qualifications gained show that overall, females are if anything ahead of males. The notion that schools are short-changing girls in areas of classroom participation and self esteem is strongly refuted by many other studies. If any particular conclusion is to be drawn from such issues, it is the fact that a change in attitude is perhaps necessary in subjects like mathematics and science so those females can recognise that they are important to their future. Unfortunately, this is not occurring.⁴

Data concerning secondary schools illustrates the fact female students who would now be of the age where they would qualify or be eligible for top employment positions, made up a small percentage of students who would have had the qualifications to further their education at a tertiary level. This concerns those who attended secondary school during the 1960s and early 1970s. Similarly, if corresponding numbers of students were to continue through to tertiary education, then a disparity between the sexes attending tertiary education may also be found. In turn, there would be larger

⁴ However, Chapter 3 will show that given the recent growth in the service sector which females enter in higher numbers than males, subjects such as mathematics and science may not be highly critical for the careers of many females.

numbers of males in top business and management positions than females. There are larger numbers of males eligible for top business positions, due to their higher qualifications that should be allowed for when considering possible discrimination against females. Therefore, we need to consider the New Zealand tertiary sector.

2.7 The Tertiary Sector In New Zealand

Currently, beyond secondary school, around half of New Zealand school leavers have continued on to further education or training. Table 2.7.1 shows that school leavers are predominantly entering universities (21.8 percent) and polytechnics (17.8 percent). Indeed, the notion of students furthering their education has certainly been apparent from the section examining secondary education where increasing numbers of female students have attained higher secondary qualifications. Yet universities, and to a lesser extent technical institutions, apprenticeship courses and colleges of education, provide the opportunity to ascertain whether females have furthered their personal investment at the highest level.

Table 2.7.1: Destination of 1996 School Leavers in Further Education and Training in July, 1997

Destination	All School Leavers (%)
College of Education	1.2
Polytechnic	17.8
Private Training Establishment	2.1
Training Opportunities Programme	6.7
University	21.8
Wananga	0.2
Total	49.8

Source: Adapted from Table 48, Ministry of Education, 1997.

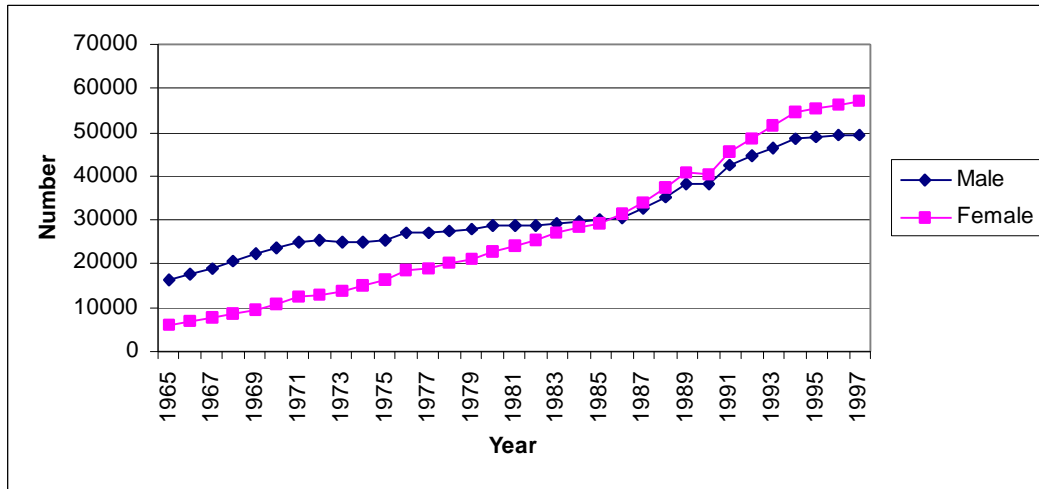
2.8 Females at New Zealand Universities

Figure 2.8.1 displays the total attendance of all males and females studying at all New Zealand universities from 1965-1997. During the 1960s, male attendance was around double that of female students. However, by mid to late 1970s the gap lessened. Furthermore, by 1986, females overtook males. During the last 5 years this gap has risen so that females now clearly outnumber males at university. Breaking down attendance numbers into full/part time internal students and extramural students' highlights the type of study conditions that females have preferred during the years examined.

Concerning full-time internal students, Figure 2.8.2 shows that during the 1960s females contributed only around one third of all students in attendance. Yet, during the late 1980s through to the 1990s the gap began to close considerably so that by 1997 female attendance was ahead of males. Figure 2.8.3 illustrates that females now dominate attendance as internal part-time students. Regarding extramural students,

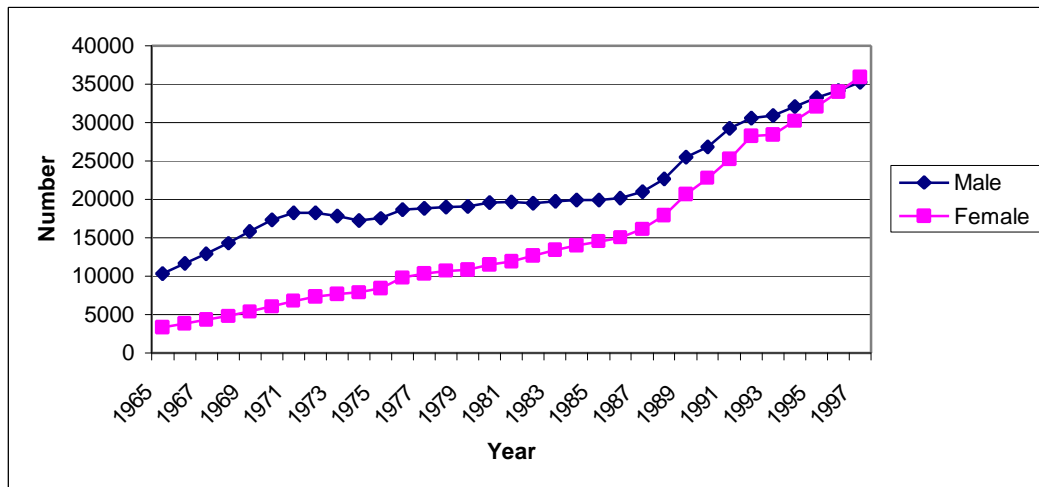
Figure 2.8.4 shows that up until 1975 females made steady progress with catching up to male numbers, with females finally overtaking male numbers in 1974. By 1976, extramural enrolments increased dramatically, especially for females. This pattern has continued through to recent years so that now there is a large disparity between the genders concerning extramural attendance. This favours female students.

Figure 2.8.1: Total Number of Students Attending New Zealand Universities By Gender, 1965-1997



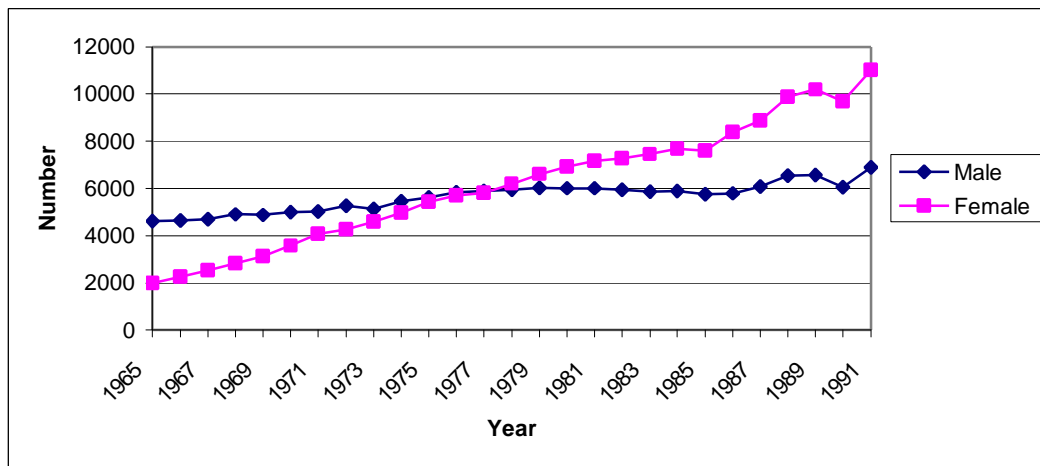
Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1997*.

Figure 2.8.2: Internal Full-Time Students Attending New Zealand Universities By Gender, 1965-1997.



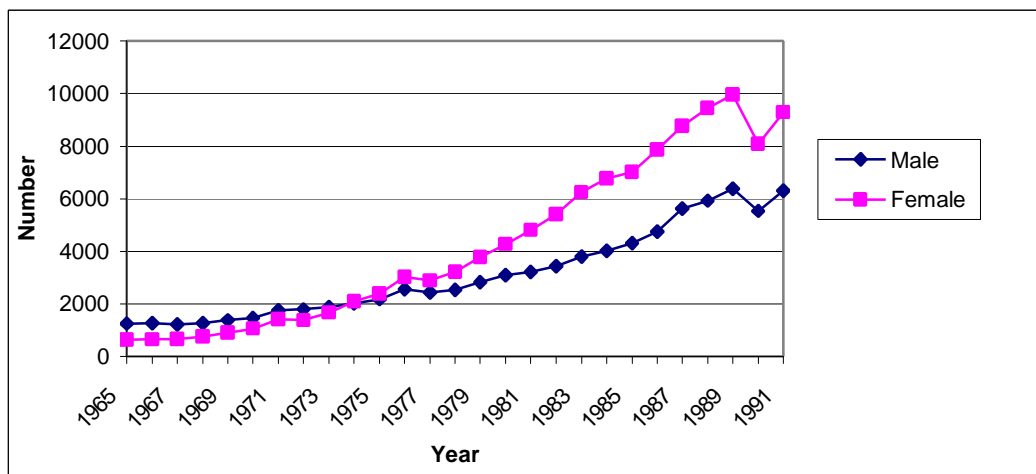
Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1997*.

Figure 2.8.3: Internal Part-Time Students Attending New Zealand Universities By Gender, 1965-1991



Source: Ministry of Education, *Education Statistics of New Zealand*, 1965-1991.

Figure 2.8.4: Extramural Students Attending New Zealand Universities By Gender, 1965-1991



Source: Ministry of Education, *Education Statistics of New Zealand*, 1965-1991.

What is clearly evident about attendance numbers of both genders at university is that females have made great strides over the last 30 years. It is now females who are the dominant sex at these institutions. Nevertheless, we need to reiterate that this change in the gender make-up of university has been a relatively new phenomenon. Attendance figures for females at universities during the 1960s and even through to the early 1970s was very low in comparison to male enrolments.

When considering the numbers of males and females enrolled at various degree levels, female numbers have risen at both under-graduate and post-graduate level. Table 2.8.1 shows that from 1965-1980, males were clearly ahead of females when enrolled for a Bachelors degree, especially in 1965 and 1970 where males outnumbered females by

more than two to one. Yet by 1985, female enrolment overtook male enrolment. This trend continued so that by 1995, there were around 6,000 more females at university enrolled in a Bachelors degree than males (45,760 compared with 38,841). Post-graduate qualifications indicate a similar trend. Numbers enrolled in post-graduate Diplomas have generally been equal between the genders in recent years. Enrolment numbers for Bachelors with Honours indicated that it was not until 1995 that females outnumbered males. Similarly, numbers of females enrolled in a Masters degree were considerably below the opposite sex and only outnumbered males by 1995. However, those enrolled for a PhD continue to be mainly males. However, the gap in 1995 was not as pronounced as in 1965, where females made up just over 7.5 percent of PhD enrolments. By 1995, this percentage had increased considerably so that female PhD students made up around 41.3 percent of PhD enrolments. Liz Gordon, in a press release stated that “*still more men than women go for higher education*” (New Zealand Alliance Party, 1999, p. 1). Looking at figures for 1995 in Table 2.8.1, females made up over 49 percent of those enrolled in postgraduate qualifications. Females have clearly made great strides in not only Bachelor enrolments but in post-graduate degrees as well. It has only been at the higher and lower end of the post-graduate spectrum with the PhD degree and the majority of the time for a post-graduate Diploma, respectively, that females are still slightly below male enrolment numbers.

Table 2.8.1: Courses Taken by Full-Time and Part-Time Students in New Zealand, 1965, 1970, 1975, 1980, 1985, 1990 and 1995

Year	Gender	PhD	Masters	Bachelors (Honours) ¹	Post Grad Diploma	Bachelors
1965	Male	295	774	342	236	10783
	Female	24	153	78	63	4254
1970	Male	662	1194	756	403	16077
	Female	64	350	241	163	7533
1975	Male	867	1375	474	497	16629
	Female	163	536	317	272	11009
1980	Male	840	1570	665	743	18308
	Female	253	804	452	447	14505
1985	Male	749	1662	689	1041	22013
	Female	319	1091	554	901	22741
1990	Male	990	2286	859	1810	28942
	Female	520	1844	797	1908	32030
1995	Male	1382	3658	1110	3796	38841
	Female	974	3801	1202	3738	45760

¹ Includes both Bachelor (Honours) at the undergraduate and postgraduate level.

Source Ministry of Education, *Education Statistics of New Zealand, 1965-1995*.

Rising participation rates for females at university has not been exclusive to New Zealand. Other countries such as the U.S. (Goldin, 1990) and the United Kingdom (Radford, 1998) have experienced similar increases in female enrolments. Explanations on why females had not previously contributed a larger percentage of

enrolment figures at universities have been varied. Some believe discrimination is the explanation.

2.8.1 Premarket Discrimination

According to McConnell and Brue (1995), human capital discrimination occurs when individuals have “*less access to productivity-increasing opportunities such as formal schooling or on-the-job training*” (p. 404). Such discrimination is broadly regarded as pre-market discrimination which Albelda *et al.*, (1997) defined as “*unequal treatment or opportunities in nonmarket settings that cause unequal labor market opportunities*” (p. 109).⁵ As far as the gender wage gap is concerned, Albelda *et al.* believed that pre-market discrimination could take the form of actual discrimination or it could be a rational response to discrimination. Hence, causality could go either way.

In relation to pre-market discrimination, Goldin (1990) took a differing view. Instead of pre-market discrimination, the author believed that it might be due to reverse causality. Goldin stated that “*because investments in human capital generally occur when individuals are young, adults close to youth often provide their only guide to an uncertain future. Each generation passes its norms and expectations to the next in a manner that often impedes social progress*” (p. 154). Also, the author argued that presently females are in a better situation to predict their futures and are therefore investing more wisely in their skills. Previous generations of females had severely under-invested in the skills required for continued employment. Goldin cited a study by the National Longitudinal Survey (NLS) in the U.S. during 1968. The study asked a sample of young females between the ages of 14 and 24 whether they would be in the labour force at age 35. Of the white females, 29 percent responded positively, whilst 59 percent of black females answered affirmatively. Nevertheless, by the time all the females surveyed were at least the age of 35, their participation rate exceeded 60 percent if married and 80 percent if they were not. Hence, the perceived participation rate that white females indicated was more in line with what was experienced in 1968 than the actual rate 16 years later (Goldin, 1990, p. 155).

In addition to successive generations experiencing rising expectations about their involvement in the labour force, existing generations have also adapted their expectations over time. Goldin highlighted work by Shaw and Shapiro (1987) which compared the expectations of a group of females born between 1944-1946. The study found that in 1968 only 33 percent of the group believed they would be in the work force at age 35. However, by 1975, expectations had risen to 57 percent. In reality, by 1980 when the group in question had reached the age of 35, 64 percent of females were in the labour force. The difference between perceived and actual participation rates had been 31 percent in 1968 but only 7 percent in 1975 (Goldin, 1990, p. 217). However, we have to mention that this is hardly surprising considering the forecasting was over an extended period of time.

⁵ Pre-market discrimination is also known as past or indirect discrimination (McConnell and Brue, 1995).

Holdstock (1998) identified two general reasons why there had been certain numbers of female and males students in particular subjects. Firstly, Holdstock emphasised the notion of some subjects being masculine, others being feminine, i.e. a masculine-feminine dimension (p. 60). Radford and Holdstock (1993, 1995a, 1995b) conducted a series of studies in the U.K. involving higher education. They stated to those surveyed that “*some subjects are chosen much more frequently by female students, and some by males, while others attract both equally*’ and then asked ‘*In your opinion, are some subjects more suitable for women and others for men?*” (Holdstock, 1998, p. 62). Their studies found that subjects such as engineering, computer studies, physics, economics and mathematics were ranked as male dominated, whilst education, foreign languages, psychology, sociology and the English language were regarded as female dominated subjects. Other subjects such as business studies, history, medicine, law and biology were perceived as gender neutral subjects. Moreover, Holdstock contended that students who enrolled in a subject that was dominated by the opposite sex tended to show characteristics of that opposing gender, i.e. females entered engineering tended to express more masculine traits (ibid., p. 60).

Secondly, Radford and Holdstock found that in many current instances “*subjects which increased in student numbers most rapidly were those which were not intellectually too demanding, and provided good employment prospects, not only in level of remuneration but also in the probability of gaining and keeping employment*” (Holdstock, 1998, p. 70). When considering overseas research, would such a statement be indicative of subjects females are entering into in New Zealand? In other words, are females in New Zealand choosing degrees that are not too demanding and have a higher likelihood of obtaining a job? From the aspect of whether a subject is seen as ‘demanding’, similar sentiments were found by Colley (1998) whereby, at a secondary school level, subjects dominated by females were recognised by both genders as being ‘simple’ and ‘easy’.

Choosing a subject that carries a level of remuneration sufficient for their intended lifestyle choice (which may involve remaining single or an expectation of marriage to someone earning more than them) and that has the ability to gain and keep employment means that females must decide on which subject to invest their time and money in. Goldin (1990) asserted above that females are now in the position to recognise the correct amount of investment required when entering the job market. Therefore, have females in New Zealand changed what subjects they have traditionally entered into over the last 30 years to take advantage of the changing employment prospects? Is it now typical that New Zealand females enter into subjects that are both less demanding and have a higher likelihood of obtaining a job?

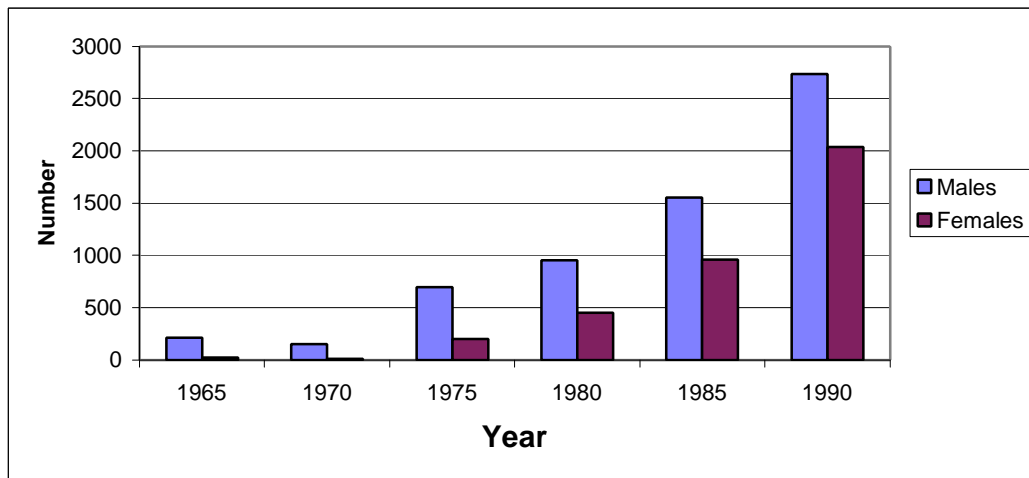
2.8.2 Business Subjects and Degrees in New Zealand

One academic area that is not overly demanding and stands a good chance of employment prospects is business degrees. Females have made great strides in enrolling for such degrees at an undergraduate level. Females only made up just over 7 percent of all business degree students in 1970 but nearly 46 percent by 1995, indicative of the fact that overall, enrolments for business degrees have become more

gender neutral (Ministry of Education, 1971 and 1995). At a more disaggregated level, accounting and economics present the only opportunity to make some type of comparison between the number of female secondary school students who studied economics and accounting and whether similar numbers continued these disciplines at university.

In the case of accounting, we see that by comparing Figure 2.8.5 involving secondary school enrolments at a seventh form level, to Figure 2.8.6 displaying university degrees awarded, there is a similar trend for female students. That is, very low numbers of females compared to males during 1965-1975, with a steady convergence of females from 1980 onwards. Female enrolments in economics at a secondary school level (Figure 2.8.7) show that females have gradually attained parity at secondary school. Degrees obtained in economics have gradually improved for females, while male numbers have been somewhat erratic (Figure 2.8.8). Again, like accounting, female enrolment numbers at secondary school and universities were very low compared to male numbers, but now contribute a sizeable proportion of all enrolments and degrees obtained.

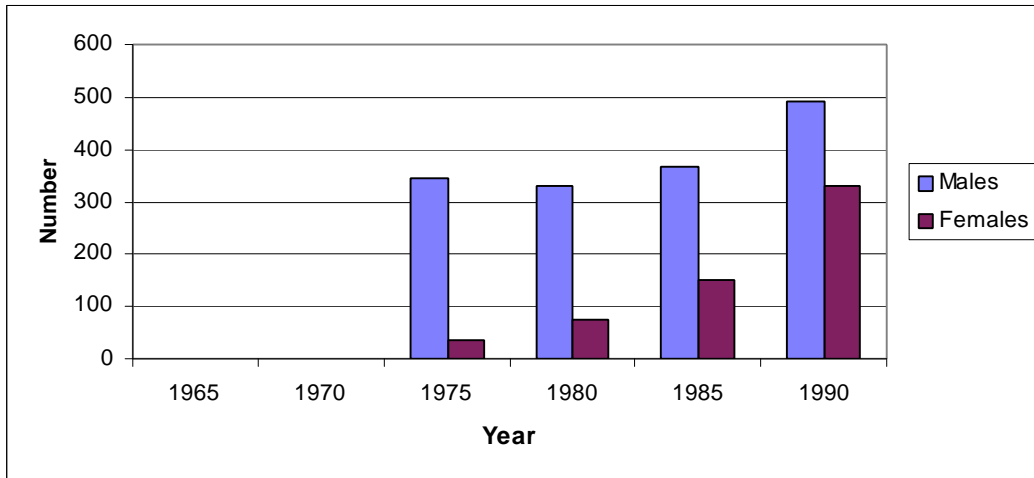
Figure 2.8.5: New Zealand Secondary Students Enrolled in Seventh Form Accounting, 1965, 1970, 1975, 1980, 1985 and 1990



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

If what Holdstock (1998) contends is correct, in that females are entering degrees that are indeed not demanding and have good employment prospects, we would expect business degrees to be a dominant course of study. However, this has not exactly been the case. Whilst business degrees have been one of the top three courses taken by females over the 30 years observed, when the various degrees that come under a business degree are aggregated, for 1996 at least, it has not been the most preferred choice. Instead, as Table 2.8.2 illustrates, a humanities degree has been the clearly dominant choice amongst females.

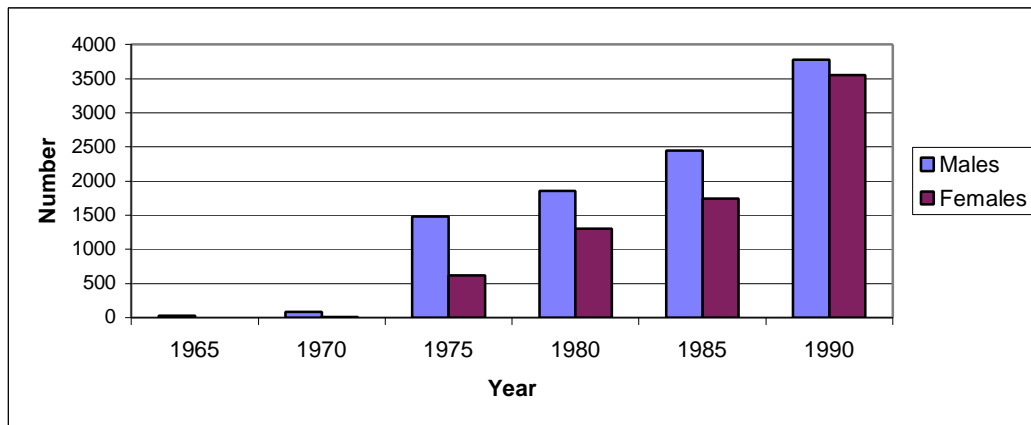
Figure 2.8.6: Bachelor Degrees in Accounting Awarded in New Zealand, 1975, 1980, 1985 and 1990



Note: Figures for 1965 and 1970 were unavailable.

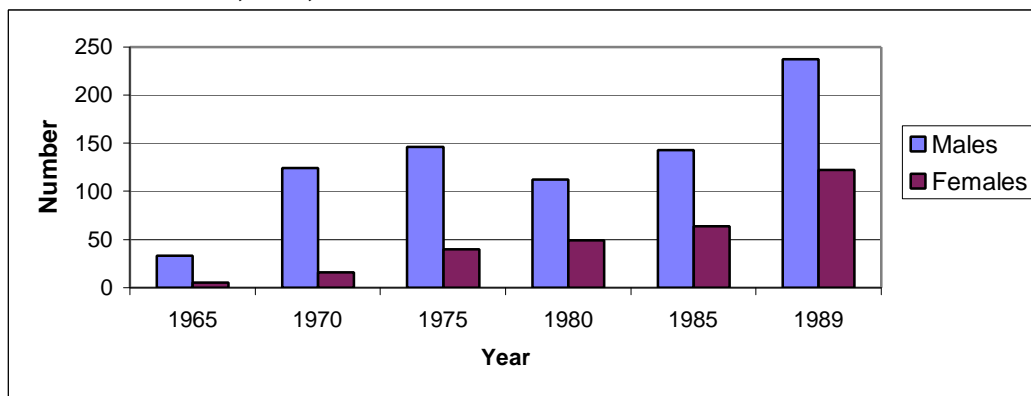
Source: Ministry of Education, *Education Statistics of New Zealand, 1975-1990*.

Figure 2.8.7: New Zealand Secondary School Students Enrolled in Seventh Form Economics, 1965, 1970, 1975, 1980, 1985, 1990



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

Figure 2.8.8: Bachelor Degrees in Economics Awarded in New Zealand, 1965, 1970, 1975, 1980, 1985 and 1989



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1989*.

Table 2.8.2: Enrolments for a Bachelor Degree at New Zealand Universities, 1996

Field of Study	Males	Females
General Programmes	0	0
Literacy	0	0
Education	525	1481
Art, Music and Handicrafts	270	387
Humanities	1241	2514
Religion and Theology	46	20
Social, Behavioural and Communication Skills	175	364
Commercial and Business	2193	2014
Law	302	409
Natural and Applied Sciences	1147	922
Mathematics	0	0
Computing	67	31
Medical and Health	414	1474
Industrial Trades and Crafts	0	0
Engineering	498	113
Architectural and Town Planning	294	183
Agriculture, Horticulture, Forestry and Fishing	141	67
Transport and Communication	27	4
Service Trades	0	0
Mass Communication	30	100
Sport and Recreation	99	111
General Foundation Programmes	0	0

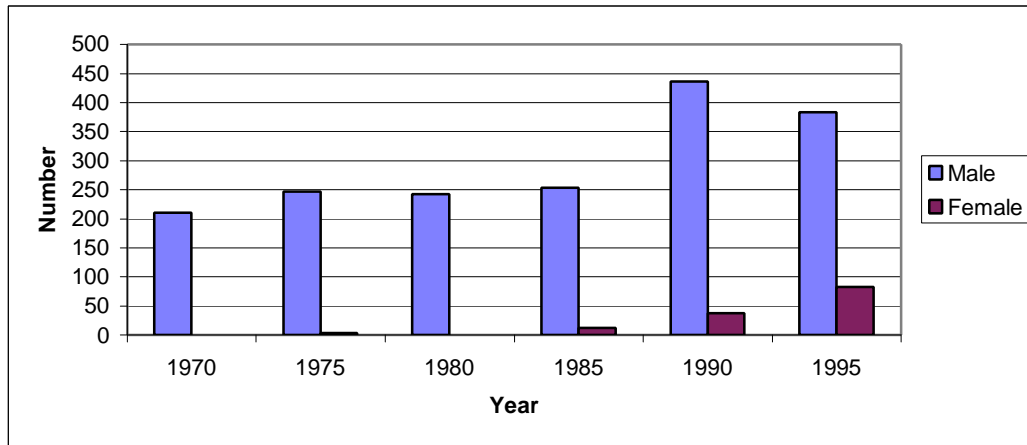
Source: Statistics New Zealand, 1998a.

Whilst a humanities degree encompasses a wide variety of degree courses from which some can be academically difficult, overall, like a business degree, a humanities degree is probably considered less demanding than other courses. More importantly though, unlike a business degree, the chances of obtaining a job tend to be centred around secondary education teaching or some type of archival or librarian position which often does not provide sufficient positions available from year to year. Also, the type of occupation entered that is associated with such a degree often provides mobility and flexible career options along with the opportunity to work part-time which may be beneficial to many females due to outside commitments such as raising a family. Looking at those females who graduated in 1990 with a humanities degree, out of the 647 female graduates, 303 had English as their major and 139 had History (Ministry of Education, 1991). The remaining female graduates predominantly had languages as their major choice that again may limit their access into many job opportunities.

2.8.3 Engineering Degrees in New Zealand

One subject that is intellectually demanding and has a high likelihood of employment with respectable pay is engineering. Figure 2.8.9 shows the number of students attaining engineering degrees in New Zealand from 1965-1995. Engineering has been and continues to be a subject heavily dominated by males.

Figure 2.8.9: Bachelor Degrees in Engineering Awarded in New Zealand, 1970, 1975, 1980, 1985, 1990 and 1995.



Source: Ministry of Education, *Education Statistics of New Zealand, 1970-1995*.

Attempts overseas to encourage more females to enter engineering have had varied success. Holdstock (1998) outlined that in the U.K., the royal charter set up an engineering council in 1981 with an overall purpose to advance education in engineering. Since its inception, the council took great measures to recruit more young people into engineering and specifically to increase the proportion of females. Three schemes were devised involving neighbouring engineers in contact with local schools, an all round degree structure which had a background in all areas and a commission to change the attitudes of young males and females towards engineering as a profession. Still, between 1980-1994, numbers of both sexes that entered into engineering degrees increased only slightly. Indeed, the rate of increase was not far different to the increase before the initiatives began. Therefore, enrolment schemes set up to encourage female participation in certain subjects may not be the optimum solution in all cases. A concerted effort was made to encourage girls into the engineering profession but with minimal success.

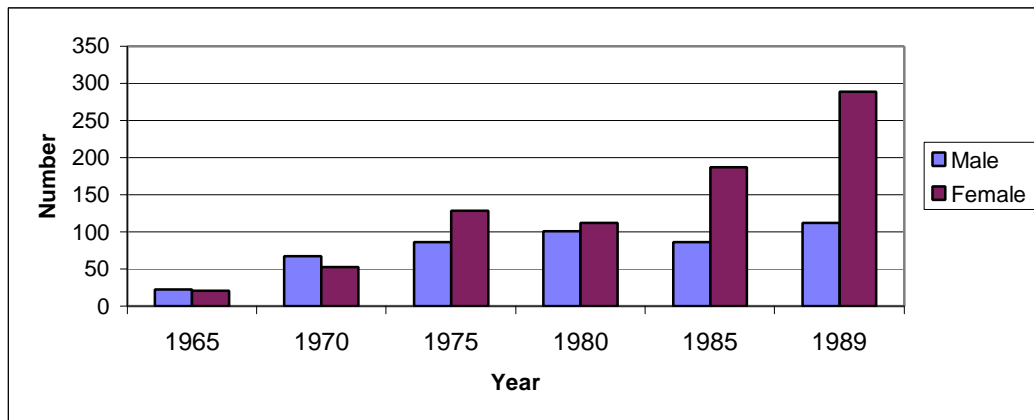
Programs in the U.S. provided a slightly differing outcome. Meece and Eccles (Holdstock, 1998) found that between 1976-1986, 29 percent more females earned Bachelors degrees in science and engineering as many programs were instigated. When funding for such programs decreased, so did female enrolments (pp. 79-80). Therefore, attitudes and practices within individual countries may play a large role over whether particular schemes to encourage females into certain subjects are successful. Moreover, we have to ask what is the long-range intention of such schemes? If a

recruitment program was introduced that was guaranteed to eliminate dominance by one gender, would we realistically expect equal numbers of both genders enrolled in such programs? Holdstock (1998) believes not. Instead, the author contends that it is possible that each change converges to a limit (p. 80).

2.8.4 Psychology Degrees in New Zealand

Psychology presents one of the few subjects that have shown a large change in its share of enrolments by both genders. Holdstock points out that as the structure of psychology shifted, so did enrolment numbers. During the 1950s and 1960s, psychology was more concerned with learning theory. Figure 2.8.10 shows that in 1965, there were roughly equal numbers of males and females. Yet, from that point, female numbers in psychology continued to grow whilst male numbers have stagnated somewhat over the last 20-30 years. According to Radford and Holdstock (1993), this change has come about due to a change in the structure of the degree. The authors asked students to rate 12 different areas of knowledge that were taught in a psychology degree in the U.K., according to their importance. Both male and female students regarded personality traits ahead of technical attributes (pp. 73-5). Although there may have previously been an undue emphasis on technical areas, there may now be an undue emphasis on personality traits. If females now dominate psychology degrees and are more inclined to pursue areas of personality traits, two problems arise. Firstly, students would not receive a comprehensive degree structure and secondly, there would be a lack of students entering technical areas of psychology. Again, care has to be taken when deciding on ways to encourage female students which may result in a reverse situation of male students turning away from psychology.

Figure 2.8.10: Bachelor Degrees in Psychology Awarded in New Zealand, 1965, 1970, 1975, 1980, 1985 and 1989.



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1989*.

In addition to which subjects females have continued on with and obtained degrees in, one has to ask whether anxiety over the lack of females' in particular subjects has been misplaced. Concerns have been expressed over the lack of female interest in mathematics and physical sciences. However, Kleinfeld (1998) pointed out that the

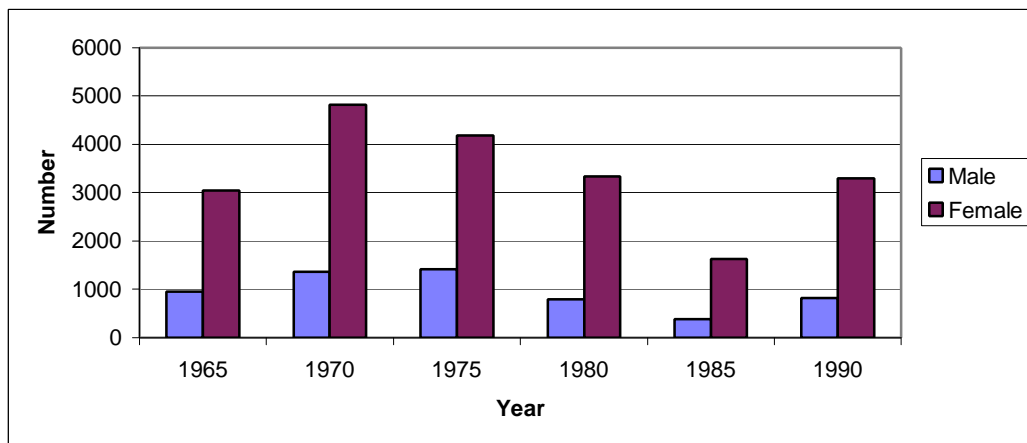
gender gap in subjects such as mathematics and physical science affected the prospects and careers of very few people (p. 18). Taking pure mathematics as an example, in 1995 there were 30 males and 24 females enrolled in a mathematics diploma or degree in New Zealand. At a postgraduate level, there were 103 males and 51 females enrolled in postgraduate mathematics degrees or diplomas. Achieving parity in postgraduate mathematics degrees would affect only around 100 females a year, whilst undergraduate parity would only affect approximately 6 females (Ministry of Education, 1995).

Taking into consideration the claim by Radford and Holdstock (1995b) that students are now entering degrees that are not too demanding and have good employment prospects, two different categories of females seem to be developing when entering university. One group is entering degree programs for the purpose of personal interest, e.g. those students who tend to enter into humanities and arts degrees. A second group is attaining professional degrees so as to move into high status occupations, e.g. those who enter business or law degrees. Therefore, if this were the case, it would be inappropriate to evaluate outcomes between all males and all females, as they would be misleading due to the motivational difference that exists between the genders.

2.9 Females at Teaching and Technical Institutions

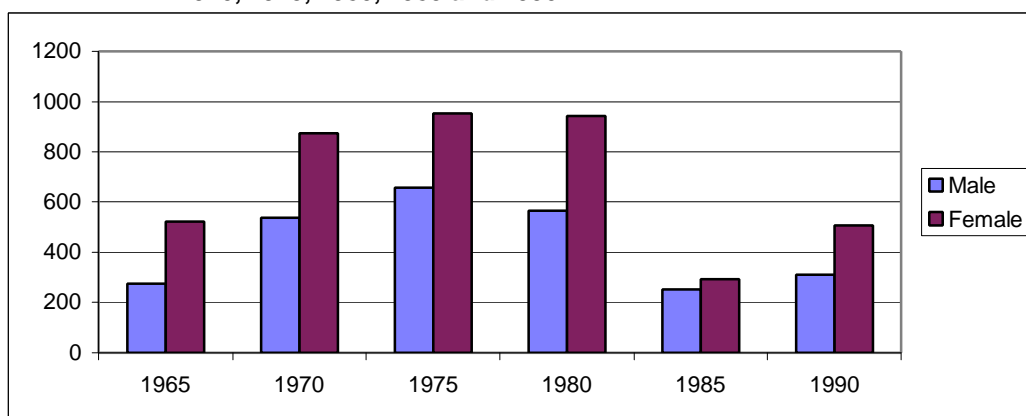
Apart from university education, students wishing to continue their education beyond the secondary level have the choice to enter other tertiary institutions. Figures 2.9.1 and 2.9.2 show males and females enrolled at the nine colleges of education throughout New Zealand in primary and secondary teaching courses respectively. Females have dominated both sectors of teacher training, especially primary training where comparisons between 1965-1990 reveal little change. Similar conclusions can be made about secondary teacher training which has attracted lower numbers of entrants. The lack of male participation has been one of the few instances of male under-achievement that has received attention.

Figure 2.9.1: Students Enrolled in Primary Teacher Training in New Zealand, 1965, 1970, 1975, 1980, 1985 and 1990.



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

Figure 2.9.2: Students Enrolled in Secondary Teacher Training in New Zealand, 1965, 1970, 1975, 1980, 1985 and 1990.



Source: Ministry of Education, *Education Statistics of New Zealand, 1965-1990*.

Polytechnic institutions have become a serious rival to universities over recent years in that they have developed a variety of courses available to students. Despite the difficulties in comparing data for technical institutes over the last four decades, some clear patterns have emerged concerning female enrolment into such courses⁶. Technical institutes, or polytechnic institutes as they are now more commonly called, have provided a wide variety of block courses and apprenticeships both in a part-time and full-time capacity to students. More courses have become available for polytechnic students over the last 30 years. Concerning technical education from 1965-1970, Table 2.9.1 shows that females were heavily enrolled in non-vocational studies. So much so that in 1965 and 1970 females enrolled in non-vocational studies made up 78 and 71 percent respectively of total student enrolments in technical education. Also, females

Table 2.9.1: Enrolments in Technical Education in New Zealand, 1965 and 1970.

Type of Class	Year	Males	Females	Total
Apprentice and other trade	1965	19079	58	19137
	1970	21853	611	22464
Technician	1965	6243	298	6541
	1970	10690	1274	11964
Professional	1965	3771	354	4125
	1970	8909	631	9540
Other Vocational	1965	6488	6693	13181
	1970	5315	10251	15566
Non-vocational	1965	10078	26749	36827
	1970	10694	31467	42161
Total	1965	45659	34152	79811
	1970	57461	44234	101695

Source: Ministry of Education, *Education Statistics of New Zealand, 1965 and 1970*.

⁶ Data concerning technical education courses are not listed consistently, making comparisons difficult. Therefore, for this thesis, data for technical education is analysed over 10-15 year periods.

made up a very low number of those enrolled in apprenticeship courses. In 1965 there were only 58 females enrolled in such a course compared with 19,079 males. The majority of such apprenticeships involved a manual trade which females may have found or considered inappropriate to enter.

Apprenticeship trade courses cover a wide variety of job training schemes involving agriculture, engineering, services, and tradecraft and industry. Non-vocational courses, which females dominated, were not subjects that greatly enhance their chance of obtaining a job. Furthering the discussion involving apprenticeship courses, figures for 1975 and 1980 concerning apprenticeship block courses again highlight the fact that males dominated such courses. Of the 21,562 students who took apprenticeship courses in 1975 only 648 were female, and out of those, 616 were enrolled in hairdressing which would generally involve training at some type of college rather than most male apprenticeship courses which would see the worker actually in the workforce. In 1980, there were 1,750 females out of 20,351 persons enrolled in apprenticeship courses. Out of the 1,750 females, 1,287 were enrolled in hairdressing, 101 in footwear manufacturing and 160 in printing (Ministry of Education, 1976 and 1981).

Recent enrolments in polytechnic courses show similar trends to university enrolments discussed previously. Table 2.9.2 shows that females now contribute a far higher percentage of enrolments for the various courses available. Again, like university data, there are certain programmes that specific genders tend to enter in higher numbers. Notably, engineering courses at polytechnic continue to be entered mainly by males, whilst females make up most of the enrolments in medical and health related programmes.

What is clearly evident from data involving both enrolments and qualifications at a secondary and tertiary sector level is that both education sectors have experienced a strong influx of females during recent years. Between 1965-1975, males were clearly in the majority at the seventh form level. This was also apparent at the university level whereby males were predominantly those who attained undergraduate and postgraduate degrees. The only areas that were female dominated were languages and arts subjects at secondary school and likewise such subjects that came under an arts or humanities degree at university. Data involving polytechnic courses again showed that it has only been in around the last 15 years that females have made serious inroads into male dominated subjects and courses. Bearing this in mind, data concerning those females now aged around 45-60, who are still in the labour force, should show very low numbers in top workplace positions; where those areas of work required qualifications that were dominated by males. However, as Table 2.9.3 illustrates, this has not really been the case.

Table 2.9.2: Enrolments in International Standard Classification of Education Level Five Polytechnic Programmes in New Zealand, 1985, 1990 and 1995.

Field of Study	Gender	1985	1990	1995
Art, Music and Handicrafts	Male	85	195	1010
	Female	119	291	1285
Humanities	Male	4	12	308
	Female	18	25	535
Commercial and Business	Male	2982	6693	9494
	Female	2248	6286	9750
Law	Male	25	80	136
	Female	236	393	816
Medical Science and Health Related	Male	319	513	630
	Female	3332	4189	2879
Maths and Computing Science	Male	109	199	247
	Female	73	107	139
Industrial Trades and Crafts	Male	343	3553	1630
	Female	263	187	448
Engineering	Male	138	1809	4218
	Female	6	322	292
Architectural and Town Planning	Male	0	98	1008
	Female	0	29	372
Agriculture, Horticulture, Forestry and Fishing	Male	118	157	592
	Female	55	57	363
Transport and Communication	Male	20	295	398
	Female	35	14	43
Service Trades	Male	6	80	289
	Female	30	198	521
Sport and Recreation	Male	0	12	291
	Female	0	2	229
Totals		10564	25796	37923

Source: Ministry of Education, *Education Statistics of New Zealand, 1985-1995*.

Table 2.9.3: Full-Time Occupations for the New Zealand Population Aged 40-65+, 1996.

Occupation	Gender	40-44	45-49	50-54	55-59	60-64	65+
Legislators, Administrators and Managers	Male	18927	19905	14379	9405	3963	1845
	Female	8853	9327	6276	3495	1113	369
Professionals	Male	11970	11670	8346	5754	2637	1173
	Female	11784	11316	7353	4404	1410	237
Technicians and Associate Professionals	Male	11400	10908	7707	5340	2484	828
	Female	7458	6975	4395	2443	762	201

Source: Statistics New Zealand, *New Zealand Census of Population and Dwellings, 1996*.

Males have dominated occupations concerning legislators, administrators and managers, and technicians and associate professionals. Numbers for professionals are fairly similar for both genders. However, the younger age groups (i.e. those aged in their 40s) have less of a difference in the 3 occupational categories concerning the genders than the older age groups.

The participation of females in specific occupations further highlights how far females have come. One such occupation is law. Wilson (1999) stated that *“it is no longer credible to state that with time women will hold an equal number of positions in the profession and the judiciary”* (p. 4). She cited the most recent data concerning females in law that whereby in 1998 there were 414 female partners out of 3042 partners in New Zealand. Even though females comprised 29.5 percent of the practising profession, they comprised only 13.6 percent of law firm partners (p. 4). There has been a wide disparity between the number of males and females who have obtained a degree in law. At an undergraduate level, up until mid 1980s at least twice as many males received a Bachelors degree in law than females. More importantly, female students who obtained some type of postgraduate degree in law were extremely low. Again, females have only made inroads during the last 10-15 years. Looking at percentages, females in 1970, 1975 and 1980 made up 8, 21 and 33 percent respectively of the students who attained a degree in law. At a postgraduate level, females in 1970, 1975 and 1980 made up 0, 14 and 39 percent attaining a law degree respectively (Ministry of Education, 1971, 1976 and 1981). Considering that it takes many years to become eligible to become a partner in a legal firm, females are not as disproportionately placed in such positions as Wilson (1999) argued. Further, we are surmising that those males and females that have attained law degrees over the last three decades have continued to stay in the profession. Yet, females are far more likely than their male counterparts to leave the workplace for certain periods of time and in some instances to withdraw from the workplace altogether, mainly due to family responsibilities.⁷ Therefore, whilst the percentages above portray possible numbers of females who would still be in the law profession, actual numbers may be much less. If this is the case, it is increasingly difficult to argue that females are not only being disadvantaged in the legal profession but in most other occupations.

2.10 Some Conclusions

Generally, males and females bring their own set of strengths and weaknesses in various subjects when they enter education. One would not expect, at least in the near future, exact numbers of both genders in the subjects available at either a secondary and tertiary level. This is despite the best of intentions to encourage females into male dominated topics, along with encouraging males into female dominated topics. Much has been made of the fact that females have lagged behind males in numbers attaining qualifications. That can not be said of the females presently enrolling. Both at undergraduate and postgraduate level, females are now ahead of males attaining degrees. This in turn relates to the position of females at work. The common argument is that it takes time before female representation is on par with males' in attaining top

⁷ See Chapter 3.

positions in various occupations. Statistics concerning education back up this claim. Females who are towards the middle and end of their working career appear not be disadvantaged by their lack of qualifications. Indeed, the issue of a wage gap in occupations between males and females is where we turn to next.