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**Grade Inflation in the Leaving Certificate
Examination 1992 - 2006**

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ABSTRACT

This study assesses the extent and pattern of change in the distribution of grades in the Irish Leaving Certificate examination between 1992, when the current grading system was introduced, and 2006. It also evaluates whether grade increases are likely to have arisen as a result of improved scholastic achievement or as a result of grade inflation.

The grade pattern in 2006 is compared with that in 1992 for the 24 higher level subjects and the 20 ordinary level that typically attracted 500 or more candidates per year across the country in each of the intervening years. The grade patterns between 1992 and 2006 are analysed in greater detail for the 10 most popular subjects as indicated by their combined uptake at higher and ordinary level in 2006.

All 24 higher level subjects showed an increased rate of combined A and B grades in 2006 over 1992, with an average increase of 54.7%. Eighteen of the twenty ordinary level subjects showed an increase in A and B grades with an average increase of 101.2%.

For the ten most popular subjects, at higher level the rate of A grades increased by an average of 144.2% and B grades by 52.2% between 1992 and 2006. At ordinary level, the comparable increases averaged across the ten subjects were 520% for A grades and 95% for B grades. Two of the ten subjects showed some decrease in A grades but all ten showed increases in the B grades.

At higher level, the changes year to year in grade rates between 1992 and 2006 demonstrated that the pattern of grade increase was continuous over the period for all subjects except Maths and that the figures for 1992 and 2006 were representative of the general trends. In Maths the grade increase was concentrated in 1993 and 1994 with no clear pattern in the subsequent years. At ordinary level the grade trend averaged over the ten subjects was initially upwards but showed clear signs of levelling off from about the year 2000. The pattern across individual subjects was much more variable than for the higher level.

In addition to a general trend of increases in the A and B grades, decreases in fail and D and little change in C grades, an additional strong pattern was discerned. There was a clear rank ordering of grade change within each grade band with the larger increases occurring at the upper end of the A and B bands and the larger decreases at the lower end of the fail and D bands. The C band was split with C1 grades showing an increased rate and both C2 and C3 showing progressively decreased rates. The trend across the period in the B grades was inexplicably mirrored almost perfectly by an opposite trend in D grades in all subjects at both levels.

While it is accepted that teachers have undoubtedly redoubled their efforts to maximise the Leaving Certificate grades of their students in the context of the points race for entry to third level courses and while there is an increasing trend of privately funded tuition and recourse to 'crammer' schools, it is nonetheless concluded that most or all of the grade increase is due to grade inflation.

The grade inflation conclusion is reached because the focus on examination preparation is almost certainly undermining the validity of the Leaving Certificate as evidenced by comparisons with other indicators of educational achievement. The grade inflation thesis is also strongly supported by the unrealistic extent of grade increase in the face of several strong trends that should have seriously restrained or counteracted such increases. There has been a considerable increase in retention rates at second level over the period accompanied by a significant shift in numbers from ordinary to higher level courses. This has occurred at a time when second level students are heavily engaged in part-time work and using the proceeds of which to fund more active social lives that includes alcohol consumption which, in important respects, tops the European league tables.

The peculiar regularity in grade increase trends and, particularly, the mirror imaging of B and D trends, also gives rise to the suspicion of post-correction manipulation of grade proportions that is grade inflationary in its effects.

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1. Introduction

Concerns about grade inflation – higher grades being awarded without improved learning – in the Irish Leaving Certificate examination have been widely expressed in the media over the last several years (e.g. Irish Independent, 2006; Irish Times, 2006; Sunday Tribune 2007; Sunday Independent 2008). A study conducted at the request of the then Minister for Education and Science, Mr Noel Dempsey, to examine grading in the Leaving Certificate acknowledged that grades had been increasing but suggested that this could be interpreted as either grade inflation or as enhanced candidate achievements as a result of focused inservice provision for teachers (Kellaghan and Millar, 2003).

The present study examines the distribution of grades in the Leaving Certificate between 1992, when the present system of grading was introduced, and 2006. It seeks to quantify the change in grade patterns over that period and evaluates whether increases in grades are likely to reflect improvements in academic achievement or stand as evidence of grade inflation.

2. The Leaving Certificate Examination

The Leaving Certificate is a state operated national system of evaluating and quantifying achievement at the end of second level education in Ireland.

In 2006 a total of 33 subjects were examined across three different levels, higher, ordinary and foundation, the latter applying to only two subjects, Irish and Mathematics. Every student in the state being examined in a particular subject at a given level take the exact same examinations at the same time and are assessed against a single marking scheme. In that sense it is very much a monolithic system designed to ensure a common standard for all.

In 2006, the most recent year covered by the present analysis, a total of 54,110 students nationwide sat the examination, down from a record high of 66,304 in 1995. The drop was caused by demographic changes resulting in fewer of the 17-18 year cohort in the Irish population.

The numbers taking the different subjects and at the various levels differ enormously. The foundation level in Maths and Irish attracts relatively few candidates as compared to the higher and ordinary levels. In 2006, 5,104 candidates sat the foundation level in Maths and 4543 in Irish. By comparison in the ordinary level, 35,113 took Maths and 26,437 took Irish. In the higher level in 2006, 9,018 sat Maths and 12,948 sat Irish. English, Maths and Irish are the three dominant subjects in terms of candidate numbers.

Over the period 1992-2006, 24 subjects at higher level and 20 subjects at ordinary level had candidate numbers exceeding 500 in each year. Many of the remaining subjects such as Latvian, Lithuanian, Latin, Agricultural Economics, Japanese and Russian attract very few candidates.

Table 1 below lists the grades applied in both the higher and ordinary level and the percentage band corresponding to each grade

Table 1: The Leaving Certificate Grades

Percentage Range	Grade
90 or over	A1
85 but less than 90	A2
80 but less than 85	B1
75 but less than 80	B2
70 but less than 75	B3
65 but less than 70	C1
60 but less than 65	C2
55 but less than 60	C3
50 but less than 55	D1
45 but less than 50	D2
40 but less than 45	D3
25 but less than 40	E
10 but less than 25	F
Less than 10	No Grade

3. Description of the Study

An initial limited analysis is conducted which includes 24 subjects for higher level and 20 for ordinary level, the subjects taken by 500 or more candidates per year. This analysis examines the rate of change in the higher grades bands, A and B, between 1992 and 2006. The twenty four subjects are the ten listed in Table 2 below together with German, Spanish, Physics, Chemistry, Agriculture Science, Engineering, Technical Drawing, Construction Studies, Accounting, Economics, Physics and Chemistry, Music, Classical Studies and Applied Mathematics. The latter four subjects are not included in the ordinary level analysis.

Then the ten most popular subjects, based on the combined ordinary and higher level candidate numbers in 2006, form the basis of a more detailed analysis. The range of candidate numbers across the ten subjects in 2006 was from 9,981 in Art to 48,406 in English. The study examines the grades in the higher and the ordinary levels but not the foundation.

Table 2 below lists the numbers in 1992 and 2006 taking each of the ten subjects at ordinary and higher level. The subjects are rank ordered by total in 2006.

For each level the rate of each grade in 2006 is compared with that for 1992 in each of the ten subjects. The rate of relative grade change is computed for each subject and for the average of the ten subjects at both

higher and ordinary level. The pattern of grade change in the intervening years is graphed and analysed to validate the accuracy of the 1992/2006 comparison as indicative of the trend over the period.

Grade increases identified are discussed in the context of other relevant indicators of achievement and other important trends over the period under analysis.

Table 2: Ten most popular subjects: candidate numbers 1992 and 2006

		Higher	Ordinary	Total
		N	N	N
English	2006	30445	17961	48406
	1992	26685	27236	53921
Maths	2006	9018	35113	44131
	1992	6225	27236	33461
Irish	2006	12948	26437	39385
	1992	11061	36984	48045
French	2006	13421	14388	27809
	1992	16105	18601	34706
Biology	2006	17048	7839	24887
	1992	14416	11327	25743
Geography	2006	17793	6868	24661
	1992	13782	7445	21227
Business	2006	12857	6568	19425
	1992	12750	9752	22502
Home Economics	2006	8202	4103	12305
	1992	12731	5606	18337
History	2006	6975	3702	10677
	1992	7616	5401	13017
Art	2006	7440	2541	9981
	1992	6393	4037	10430

4. Higher Level Findings

4.1 Analysis of all 24 Subjects.

Changes in the rates of combined A and B grades were computed for all 24 subjects that had at least 500 candidates in each year between 1992 and 2006.

The mean rate of combined A and B grades across the 24 subjects was 31.4% in 1992 and 46.6% in 2006. The 2006 rates in individual subjects showed percentage increases over the 1992 baseline of between 2.6% (Construction Studies) and 130% (Geography) with a mean increase across the 24 subjects of 54.7%.

Subjects with increases above the mean were Irish, English, Geography, French, Art, Physics, Agricultural Science, Accounting, Business, Economics and Music. Six of those 11 subjects, Irish, English, Geography,

French, Art and Business, feature among the 10 most popular subjects analysed in detail below.

There is evidence of very considerable grade increase involving every subject to a lesser or greater extent. On the basis of the change in the rate of combined A and B grades, the increase appears to have disproportionately occurred among the more popular subjects, thereby increasing the overall impact of grade increase.

4.2 The Rate of Grade Change in the 10 Most Popular Subjects.

Table 3 below lists the percent of grades in 1992 and in 2006 and the percent change in each grade over the interval.

Table 3: Leaving Certificate Higher: Grade Changes 1992-2006

		A	B	C	D	FAIL
English	2006 %	10.4	27.7	38.7	21.8	1.3
	1992 %	4.2	16.9	41	34.7	3.1
	Change%	147.6	63.9	-5.6	-37.2	-58.1
Maths	2006 %	14.4	34.7	33.4	14.5	3.2
	1992 %	7.4	25.3	35.1	24.7	7.6
	Change%	94.6	37.2	-4.8	-41.3	-57.9
Irish	2006 %	12.8	36	36	14.3	0.9
	1992 %	3.3	25.9	45.8	22.9	2.1
	Change%	287.9	39.0	-21.4	-37.6	-57.1
French	2006 %	13.8	26.3	31.5	25.5	2.9
	1992 %	5.6	20.7	36.9	31.7	5
	Change%	146.4	27.1	-14.6	-19.6	-42.0
Biology	2006 %	16.7	27.2	27.8	21.2	7.1
	1992 %	6.6	28.1	34.7	22.5	8.1
	Change%	153.0	-3.2	-19.9	-5.8	-12.3
Geography	2006 %	9.8	31.6	37.8	19.1	1.8
	1992 %	3.4	14.6	42.4	33.3	6.4
	Change%	188.2	116.4	-10.8	-42.6	-71.9
Business	2006%	11.6	28.2	28.3	24.2	7.7
	1992%	3.8	19.2	34.1	30.7	12.1
	Change%	205.3	46.9	-17.0	-21.2	-36.4
Home Economics	2006%	7.2	28.9	37.2	22.5	4
	1992%	5.3	22.1	37.5	26.8	8.3
	Change%	35.8	30.8	-0.8	-16.0	-51.8
History	2006 %	12.5	30.2	32.6	20.3	4.4
	1992 %	9.2	20.7	30.1	27.3	12.7
	Change%	35.9	45.9	8.3	-25.6	-65.4

Art	2006 %	4.7	33.1	43.2	17.7	1.3
	1992 %	1.9	15.2	40.7	36.8	5.5
	Change%	147.4	117.8	6.1	-51.9	-76.4
	Mean % Change	144.2	52.2	-8.1	-29.9	-52.9

For ease of understanding, the various A, B, C, D and Fail grades are combined in each case.

It is immediately evident that, with the exception of the B grades in Biology, every subject showed an increase in A and B grades between 1992 and 2006. The average change over the ten subjects is far greater for the A grades, with an increase of 144.2% as compared with a 52.2% average increase in B grades.

Conversely, the rate of C, D and Fail grades all decreased. While it is inevitable that the poorer grades must decline for the better grades to increase, it is striking that the larger decreases are at the lower end with Fail grades dropping by 52.9% and the D grade by 29.9%. By comparison the C grade evidenced only a modest decrease of 8.1%.

When base rates are low it is possible to show very substantial percentage or relative increases in figures with the addition of quite small numbers. The large relative increase in better grades and decrease in poorer grades cannot be dismissed in this manner. By any standard the changes are very substantial impacting greatly on the chances of getting a much better Leaving Certificate result in 2006 as compared with 1992. A closer look at the figures is instructive.

In 1992 the rate of A grades across the ten subjects ranged from 1.9% (Art) to 9.2% (History) with five subjects below 5% including English and Irish. In 2006 the rate of A grades ranged from 4.7% (Art) to 16.7% (Biology) with only one subject now under 5% and seven out of the ten above 10% including English, Irish and Maths.

As regards the B grades, the range in 1992 was from 14.6% (Geography) to 28.1% (Biology) with four of the ten below 20%. In 2006 no subject was under 20% and five were now over 30%. The range was from 26.3% (French) to 36% (Irish).

The C grades showed the least relative change, though over a larger baseline in each case. In 1992 the range was from 30.1% (History) to 45.8% (Irish). In 2006 it was from 27.8% (Biology) to 43.2% (Art). History and Art were the only subjects that did not show a decline in C grades, both evidencing modest increases. There was an average decline of 8.1% in the award of C grades.

One of the most striking features of the grade changes is the reversal of fortunes for the A and B by comparison with the C grades. In 1992, the average rate of combined A and B grades across the 10 subjects was 25.9%, as compared with an average of 37.8% for the C grades. In 2006 the situation had been reversed with the combined A and B grades now having an average rate of 41.8% in comparison to an average rate of 34.7% for the C grade.

All subjects showed a decline in both D and Fail grades.

In 1992 the rate of D grades ranged from 22.5% (Biology) to 36.8% (Art) with 5 subjects over 30%. In 2006, no subject had a rate even close to 30%, the range going from 14.3% (Irish) to 25.5% (French). Four subjects had rates under 20% and nine under 25%.

The rate of fail grades showed by far the greatest relative drop. Averaged across the ten subjects it halved from 6.5% in 1992 to 3.5% in 2006. In 1992 seven out of the ten subjects had failure rates in excess of 5%, the overall range being from 2.1% (Irish) to 12.7% (History). In 2006, only 2 subjects had a failure rate above 5% with the overall range being from 0.9% (Irish) to 7.7% (Business).

4.3 More Differentiated Grades

Combining the various A, B, C, D and Fail grades, while helpful, in that it reduces the complexity of the pattern of figures under examination, runs the risk of concealing some important trends.

Table 4: Relative change in grade rates 1992 to 2006 averaged over 10 subjects

Grade	% change from 1992 baseline
A1	+307
A2	+98
B1	+222
B2	+83
B3	+13
C1	+44
C2	-6
C3	-30
D1	-10
D2	-35
D3	-41
E	-51
F	-54
NG	-78*

*The NG figure was not computed in the same way as the other grades. Because some of the baseline rates were zero it was not possible to compute the percentage change for all subjects. As an alternative, the mean NG was computed for 1992 and for 2006 and the difference expressed as a percentage of the 1992 mean. This gives a smaller figure than would result if the mean of the individual subject rates of change were used as in the other grades.

Table 4 above reveals just such an important trend: that the level of grade increases and decreases are heavily skewed within each of the grade bands discussed in 4.2.

When dealing with relative rates of movement across neighbouring categories (grades in this case) where the baseline numbers are unequal, it is inevitable that relative increases will not be equivalent. If, for example, there were fewer A1 than A2 grades in the 1992 baseline, then a shift of a given number of cases from the A2 to the A1 category by 2006 will show up as a greater percentage growth for A1 than decline for A2. That said, while this mathematical artefact might be expected to produce bigger proportionate changes in grades that have lower baseline numbers in 1992, it would not be expected to show distinct threshold changes between the A grades and the B grades and between the B grades and the C grades and so on. In other words it would be expected that the relative changes in grades would grow as one moves up through the higher grades and likewise as one goes down through the lower with the least relative movement in the middle grades. A trend approximately following that pattern is discernible in Table 4 above. The surprise is to find that a similar trend exists *within* the grades making up each of the bands. There is no obvious reason why the relative increase is so much greater for the B1 than the A2 grade or why the C1 rate of increase is much larger than that for the B3 grade.

In each grade band, A, B, C, D and Fail, the rate of grade change is operating in an identical and very precise way. In the higher grades the increase is concentrated heavily in the upper reaches of the band. In the lower grades the decreases are heavily weighted towards the lower end of the grade bands. In each grade band there is an unvarying rank order of grade change all operating towards the same effect, increasing the rate of better A, B and C grades and reducing the rate of poorer C, D and Fail grades. The C band shows the interesting pattern of an actual increase in the C1 grade, an increase which is masked in the combined C grades by somewhat more substantial decreases in the combined C2 and C3 grades.

It is apparent that two kinds of grade increase (better grades being obtained) has occurred between 1992 and 2006, both very substantial. On the one hand the rate of A, B and C grades has gone up, while on the other, within each grade band the grades have become more concentrated at the upper end in each case.

Appendix 2 below includes graphs of the grade distribution in 2006 as compared with 1992 for each of the ten subjects. The graphs provide a striking visual illustration of the extent to which the grade pattern has shifted upward - or towards the left in the graphs. In 1992 the modal grade was very much C3. In 2006 C1 has become the modal grade, followed closely by B3. Another obvious change is the flattening of the

midpoint peak in the C range, very evident in 1992, much less apparent in 2006. The shift towards the ceiling effect is also becoming obvious with the grades piling up on the left and the tail of the normal distribution being lost on that side.

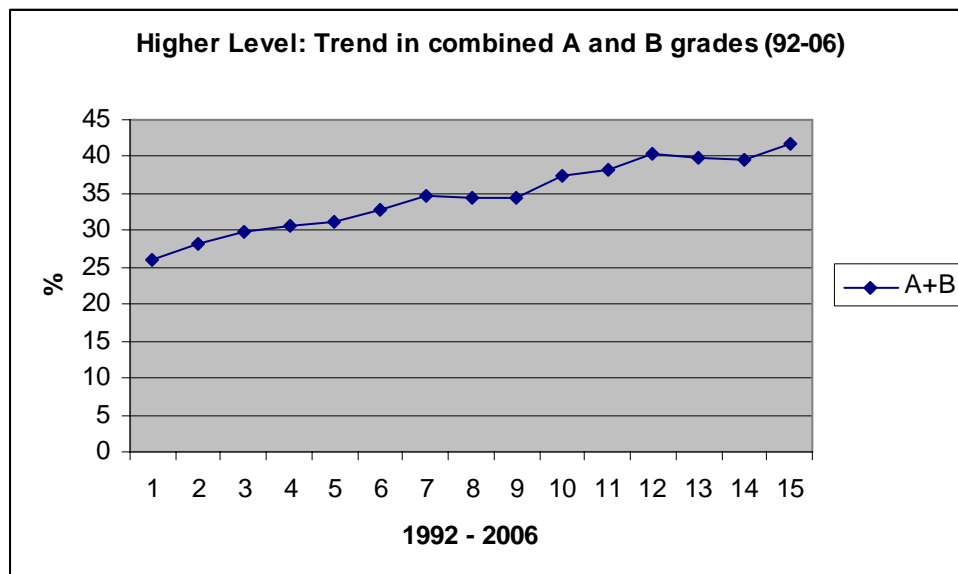
4.4 . Pattern of Grade Change within the 1992-2006 Interval.

The question arises as to whether the grade changes have occurred more or less smoothly over the 14 year period under examination and to what extent the pattern of change is similar for all ten subjects. It is possible that for some subjects, at least, the 1992 and 2006 figures may be misleading and that over the period as a whole the grade pattern is not as suggested by a comparison of the end points.

Figure 1 below graphs the changes in the percentage of combined A and B grades as averaged over the ten subjects. As with the average figures above, this is the average of the individual subject figures for each year and does not differentially weight for the number of candidates taking the examination.

A continuous upward trend is evident rising quite steadily from a low of 26% in 1993 to a high of 42% in 2006.

Figure 1



Figures 2 and 3 below graph the mean or average % for each grade across all ten subjects from 1992 to 2006. Figure 2 shows the pattern for the increasing grades: A1 to C1. Figure 3 shows the pattern for decreasing grades: C2: Fail. The rates for the various fail grades (E, F, and NG) are combined because of the small proportions in each case.

Figure 2

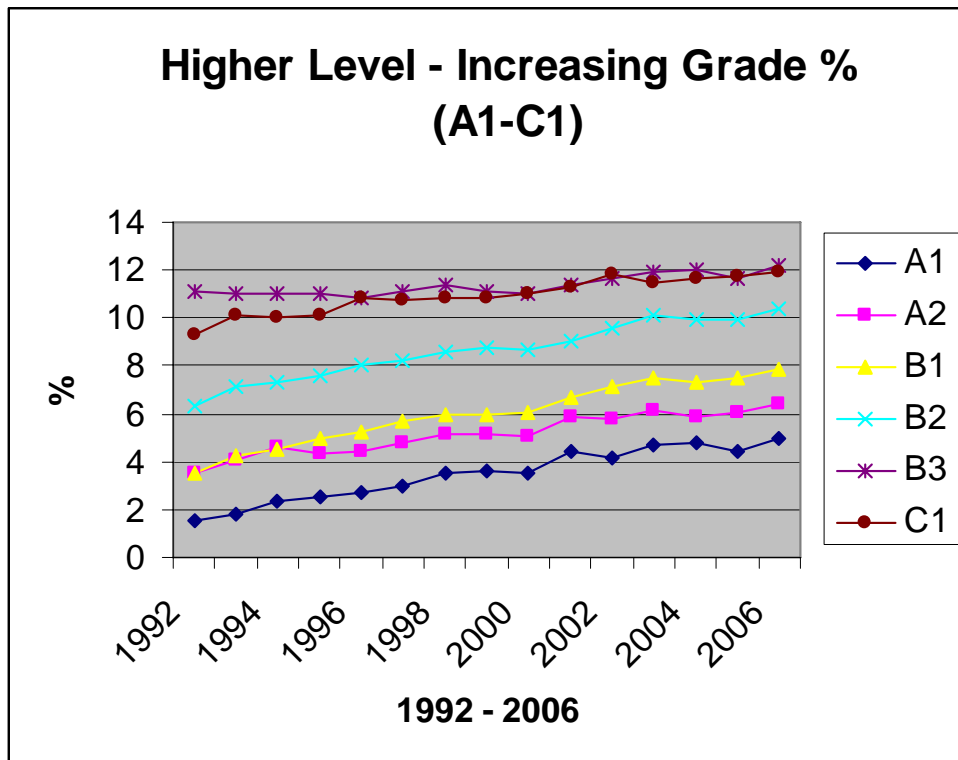
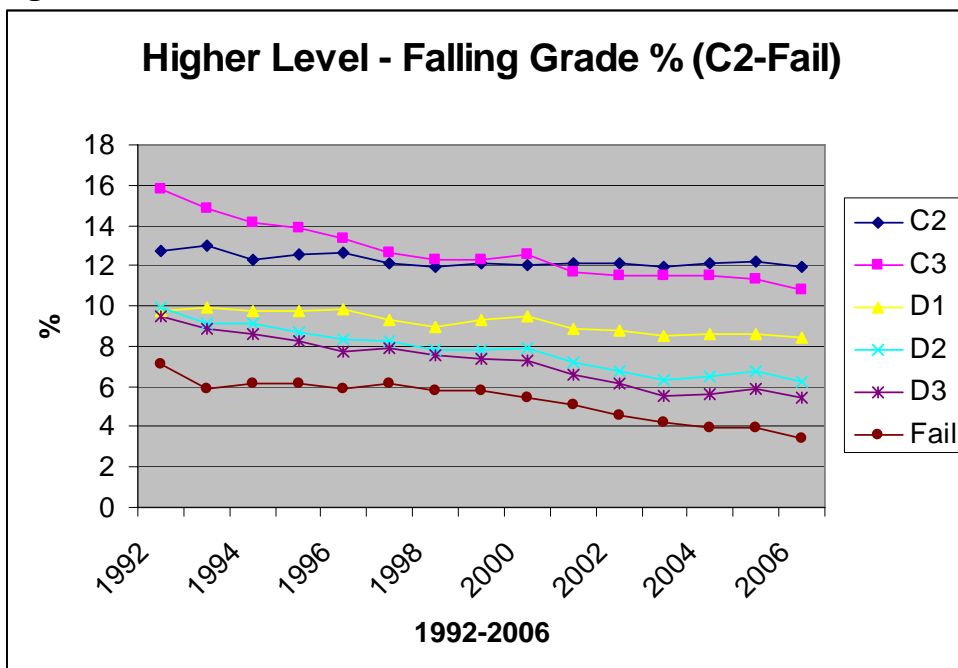


Figure 3



Appendix 1 contains the graphs for each of the ten individual subjects and shows the trends for each of the broad A, B, C, D and Fail bands. A careful

scrutiny of those graphs reveals that, with the exception of Maths, there is a clear trend of grade increase in each subject across the whole period.

While inevitably the trend lines are not perfectly smooth, there being both rises and falls in successive years for all grades, the overall trend is continuously upwards in A and B grades and downwards in D and Fail grades. The C grade shows a pattern of more stability, though some subjects such as Irish and Geography show clear declines.

Maths is an exception to the general rule of grade change. It showed much greater volatility in each grade over the 1992 – 2006 period. It is the sole subject where it would be difficult to interpret from the trend lines a clear pattern of increase in better and a decline in lower grades. Otherwise, the conclusions drawn from a comparison of 1992 and 2006 grades are strongly supported by the grade figures for the intervening years.

A remarkable feature of the trend lines is the degree to which in every subject the B and D grades mirror each other. Rises and falls from year to year in B grades are matched almost perfectly by falls and rises in D grades. As one goes up, the other drops. It is difficult to see how such a regular pattern could emerge without deliberate intention.

5. Ordinary Level Findings

5.1 Analysis of all 20 Subjects.

As with the higher level, changes in the rates of combined A and B grades were computed for all 20 subjects that had at least 500 candidates in each year between 1992 and 2006.

The mean rate of combined A and B grades across the 24 subjects was 18.5 % in 1992 and 33.2% in 2006. The 2006 rates in individual subjects showed percentage changes over the 1992 baseline of between -27.7% (Construction Studies) and +888.2% (Agriculture Science) with a mean increase across the 20 subjects of 140.5%

All but two subjects, Construction Studies (-27.7%) and Home Economics (-2%), showed an increase in the rate of combined A and B grades over the period.

Subjects with increases above the mean were Agriculture Science, English, Maths, French and Spanish. The very large percentage increase in Agricultural Science from 1.7% in 1992 to 16.8% in 2006 has an upwards distorting effect on the mean. The next largest increase was in English (299%) and then Maths (277.5%). The mean rate of increase in A+B grades across the other 19 subjects is 101.2%. Other subjects with rate increases above that level are Irish, German, Physics and Economics.

While not as many of the ten most popular subjects have a rate of increase above the norm as in the higher level (4 as opposed to 6), it is striking that English, Maths and Irish, the three numerically dominant subjects, are among those with a very high rate of increase in A and B grades.

There is evidence of very considerable grade increase involving all but two subjects. The atypically high increases in English, Irish and Maths exert a disproportionate impact on Leaving Certificate outcomes because of their very high uptake at ordinary level.

5.2 The Rate of Grade Change in the 10 Most Popular Subjects.

The same ten most popular subjects are analysed at the ordinary level. Table 5 below lists the percent of grades in 1992 and in 2006 and the percent change in each grade in the interval for each of the ten subjects.

Similar to the higher level examination, the least changes occurred in the C grades with an average increase of 6%. This however represents substantial changes in many cases due to the relatively high baseline at 1992. As indicated above, three subjects, English, Maths and Business, showed declines in C grades. The changes in English and Business were relatively minor but much more significant in Maths where the rate of C grades dropped from 41% to 27.2%. This was matched by large increases in the rate of A and B grades. The rate of A grades went from 0.6% to 11.5% and the rate of B grades went from 9.6% to 27%. Some of the increases in the C grade should also be viewed as substantial and affecting a significant proportion of examination candidates. The larger increases occurred in Art, where the rate climbed from 35.6% to 44.4% and in Geography, 34.9% to 41.8%.

As with the higher level examination, the change in proportion of combined A and B grades in comparison with C grades is notable. In 1992, the rate of C grades at 35% was double that of the combined A and B grades at 17.5%. In 2006 the combined rate of A and B grades, at 33%, was now nearly 90% of the rate for C grades which stood at 37%.

With increases in the A, B and C grades, inevitably the rate of D and Fail grades declined. The average fall in the D grade across the 10 subjects was 31.7% with all subjects showing the decline. In 1992 the range of D grades was from 22.5% (History) to 45.5% (French). In 2006 the range was from 17.9% (English) to 29.6% (French). In 1992 four of the ten subjects had D rates in excess of 40% with three others over 30%. In 2006, only three subjects had rates in excess of 25% and three had rates under 20%.

Table 5 Leaving Certificate Ordinary: Grade Changes 1992-2006

		A	B	C	D	FAIL
English	2006 %	8.2	32.5	38.8	17.9	2.5
	1992 %	0.6	9.6	41	41.8	6.9
	Change%	1266.7	238.5	-5.4	-57.2	-63.8
Maths	2006 %	11.5	27	27.2	22.8	11.4
	1992 %	0.6	9.6	41	41.8	6.9
	Change%	1816.7	181.3	-33.7	-45.5	65.2
Irish	2006 %	4.1	30.4	37.1	22.4	6.1
	1992 %	0.5	16.5	34.2	29.2	19.4
	Change%	720	84.2	8.5	-23.3	-68.6
French	2006 %	1.1	20.4	41.1	29.6	7.7
	1992 %	0.1	7.6	36	45.5	10.6
	Change%	1000	168.4	14.2	-34.9	-27.4
Biology	2006 %	3.9	26.6	34.4	21.7	13.2
	1992 %	2.2	17	30.9	30.1	19.8
	Change%	77.3	56.5	11.3	-27.9	-33.3
Geography	2006 %	4.2	26.1	41.8	22.7	5.2
	1992 %	2.3	17.3	34.9	34	11.5
	Change%	82.6	50.9	19.8	-33.2	-54.8
Business	2006 %	10.2	30.5	34.3	19.9	5.2
	1992 %	2.9	20	35.6	29.8	11.6
	Change%	251.7	52.5	-3.7	-33.2	-55.2
Home Economics	2006 %	0.9	19.1	43.3	28.1	8.6
	1992 %	1.9	18.5	38.1	32.1	9.6
	Change%	-52.6	3.2	13.6	-12.5	-10.4
History	2006 %	19.3	29.8	27.2	19.9	3.8
	1992 %	12.4	22.6	24.6	22.5	17.9
	Change%	55.6	31.9	10.6	-11.6	-78.8
Art	2006 %	1.5	21.5	44.4	26.7	6
	1992 %	1.8	11.5	35.6	42.8	8.4
	Change%	-16.7	87.0	24.7	-37.6	-28.6
	Mean % Change	520.1	95.4	6.0	-31.7	-35.6

Eight out of the ten subjects showed an increase in A grades, the exceptions being Home Economics and Art where the rates of As were less in 2006 than in 1992. The rate of B grades increased for all ten subjects. As with the higher level courses, the C grade showed the least change. Three subjects, Maths, English and Business evidenced declines in the C grade, the latter two very marginal. The other seven subjects experienced, on average, minor increases in the C grade. The rate of D grades dropped in all ten subjects as did Fail grades with the exception of Maths where there was a 65% increase.

In relative terms, the degree of increase in the A grade dwarfed all other changes. Averaged over the ten subjects the increase exceeded 500%. Averaged over the eight subjects that showed an increase the relative jump between 1992 and 2006 was 659%. The magnitude of a relative increase is, of course, heavily dependent on the size of the baseline figure, which in this case were very low. The range for the rate of A grades across the ten subjects in 1992 was from 0.1 (French) to 12.4 (History). History, however, was very much an outlier, the next largest rate of As being 2.9% for Business. The average rate of A grades in 1992 was 2.5% resulting in quite a low baseline. That said, the average rate of A grades had climbed to 6.5% by 2006, an increase of in the order of two and a half times. That is a significant change by any standard.

Though not nearly as large in relative terms, the rate of increase in B grades, averaging at 95%, has to be viewed against a much more substantial baseline. In 1992 the range varied from 7.6% (French) to 22.6% (History). In 2006 the range was from 19.1% (Home Economics) to 32.5% (English). Because of the larger baseline figures in 1992, a smaller relative increase as compared with the A grade meant that the increase in B grades benefited a much greater proportion of the students taking the Leaving Certificate examination. In 1992, eight of the ten subjects had a rate of B grades below 20%, with 3 below 10%. In 2006 no subject had a rate below 10% and only one subject had a rate under 20%, that only marginally so at 19.1%. Three subjects had a rate of B grades in excess of 30%.

The Fail grades went down by 35.6%. Only Maths, with an increase in the rate of failures from 6.9% to 11.4%, did not follow the pattern. The range for Fail grades in 1992 ran from 6.9% (English and Maths) to 19.8% (Biology) as compared with 2.5% (English) to 13.2% (Biology) in 2006. In 1992 two subjects, Biology and Irish had failure rates between 18% and 20% and four others had rates over 10%. In 2006, only two subjects Biology and Maths had failure rates above 10%.

5.3. More Differentiated Grades

A similar picture to that obtained above for the higher level examination was uncovered when the rates of change between 1992 and 2006 were computed for the individual grades. The grade figures are listed in Table 6 below. The pattern is most easily discerned in the B, C and D grades. In each case there is a clear skew in the rate of grade change. For the B grades, the rate of increase is greatest at the higher end, with the B1, B2 and B3 following a sharply descending rank order. In the C grades there is a similar rank order across C1, C2 and C3, with the C3 rate declining. In the D grade the rate of decline follows the reverse rank order. The pattern in the A grades is obscured somewhat by the difficulty in computing

equivalent figures for the A1 grade due to the fact that for several subjects the baseline or 1992 rates were at zero. However, by using the alternative computation described at the foot of Table 6 for both grades, it becomes evident that a similar pattern of grade change exists for the A grades as for the B, C and D grades.

Table 6: Relative change in grade % 1992-2006 averaged over 10 subjects

Grade	% change from 1992 baseline
A1	+221*
A2	+369 (+131**)
B1	+386
B2	+157
B3	+46
C1	+66
C2	+15
C3	-23
D1	-3
D2	-34
D3	-47
E	-41
F	+6
NG	-47*

*The A1 and NG figures were not computed in the same way as the other grades. Because some of the baseline rates were zero it was not possible to compute the percentage change for all subjects. As an alternative the mean A1 and NG were computed for 1992 and for 2006 and the differences expressed as percentages of the 1992 means. This gives smaller figures than would result if the mean of the individual subject rates of change were used as in the other grades.

** A2 computed in the same way as A1 for comparison purposes.

The only exception is the Fail grades where the F grade breaks the trend by showing an increase. An examination of the individual subject figures reveals that the increase in the F grade averaged across the ten subjects is almost entirely due to Maths. When Maths is excluded and the averages are computed across the remaining nine subjects, the F grade now shows a decline of 32% which more closely follows the pattern of the other grades. The average rate of decline for the E grade, at 49% when Maths is excluded is still greater than that for the F grade which is contrary to the rank order of grade change in all other grade bands. The figure for the NG grade (an average decline of 53% with maths excluded) being marginally greater than either the figure for E or D grades, follows the expected pattern. It should be noted that as indicated at the foot of Table 6, the NG figure was, of necessity, computed in a way that results in a smaller figure than would be obtained by the alternative computation.

Overall then, with some uncertainty attached to the fail grades, a similar pattern of increase was found within each of the grade bands for the ordinary level examination as that described above for the higher level. Again, the rate of increase tends to peak at the top end of the upper grade

bands and the rate of decrease tends to peak at the lower end of the lower grade bands

As described for the higher level above, grade increase in the ordinary level occurred in two ways. There was a marked shift away from the D and Fail grades and towards the A and B grades. In addition, within each letter grade band there was a shift in grading towards awarding greater proportions at the upper end of the bands for A, B and C grades and towards awarding fewer grades at the lower end of the D and possibly to some extent also in the Fail band.

The graphs showing the distributions for all grades in 1992 as compared with 2006 for all ten ordinary level subjects are included below in Appendix 4. As with the higher level subjects discussed above, the graphs reveal the extent of the upward shift in grades. In 1992 the modal grade was C3 (5 subjects) followed by D3 (3 subjects). In 2006 the modal grade was C2 (4 subjects) followed by B3 (3 subjects).

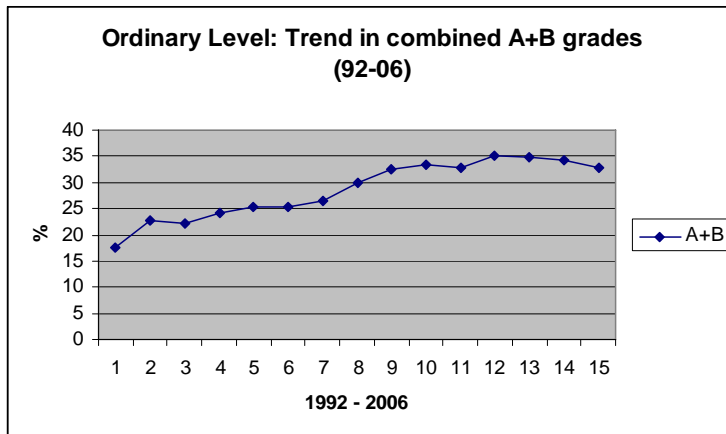
Across the ten subjects the same degree of flattening out of the distribution of grades does not seem to be in evidence as in the higher level. Two subjects, Maths and History, show remarkably even grade patterns in 2006 with all semblance of the normal curve being lost.

5.4. Pattern of Grade Change Within the 1992-2006 Interval.

Figure 4 below shows the overall trend from 1992 through to 2006 in the combined A and B grades. This is based on the average of the ten subjects in each year.

It is evident that the trend in higher grades has been, in the main, consistently upwards. From a low of 17.5% at the beginning in 1992, it doubled to a peak of 35% in 2003 and 2004, dropped a fraction to 34% in 2005 and to 33% in 2006. It remains to be seen if the slight dip in 2005 and 2006 is the start of a downward trend or just a random effect in an otherwise continuous pattern.

Figure 4: Ordinary Level - Trend in combined A and B grades averaged across the ten subjects.



Figures 5 and 6 below graph the mean or average % for each grade across all ten ordinary level subjects from 1992 to 2006. Figure 5 shows the pattern for the increasing grades: A1 to C2. Figure 6 shows the pattern for decreasing grades: C3 to Fail. As with the higher level grades graphed in Figures 2 and 3 above, the various fail grades (E,F, NG) are combined in one because of the small proportions in each.

Figure 5: Ordinary Level – Trend in grades that showed an increased rate over the 1992-2006 period when averaged across the ten subjects

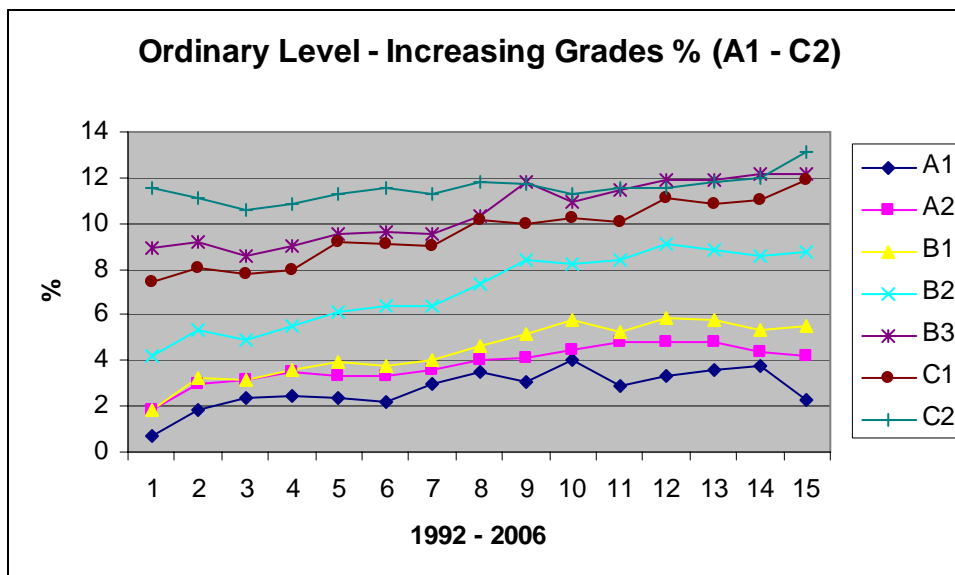
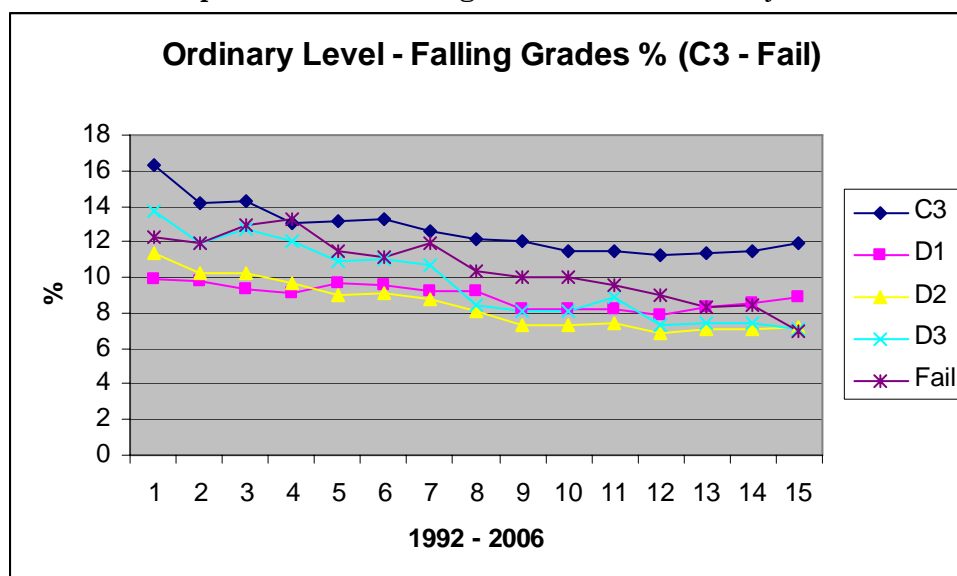


Figure 6: Ordinary Level – Trend in grades that showed a decreased rate over the 1992- 2006 period when averaged across the ten subjects



Signs of a levelling off in grade change from around the year 2000 can be discerned in the graphs. While, on average, fail grades continue to decline and C1 and C2 grades to rise, A and B grades have stopped increasing. This is matched by a static situation in the trend for C3 and D grades. Future trend analysis will show whether this indicates that grade change at ordinary level is coming to an end.

The trends in the broad A, B, C, D and Fail bands across the period 1992-2006 are graphed for each subject in Appendix 3. An examination of the trend lines does not reveal as consistent a pattern as in the higher level subjects. While generally a trend towards better grades is discernible, this does not apply to every subject across the period. Home Economics and Biology demonstrate little clear patterns of change. In Maths, after major increases in A and B grades in 1993 matched by similar declines in C and D grades, there was no clear trend of change over the remaining period. Art showed a decline in the A grades but an increase in the B and C and History demonstrated an erratic upward shift in the A grades but no clear change in Bs. The trend lines in other subjects more obviously bear out the conclusions drawn from the comparison between the 1992 and 2006 figures and from the trends averaged across the 10 subjects.

6. Discussion: Is this Grade Inflation?

6.1 Level of Grade Increase

In the higher level Leaving Certificate, a strong continuous trend of grade increase characterises the period from 1992 to 2006. This pattern is true of all popular subjects with the partial exception of Maths where the grade

increase is concentrated in the earlier years. The average increases from 1992 to 2006 in the rate of A and B grades across the ten most popular subjects were 147% and 118% respectively

At ordinary level, the 1992-2006 period was also characterised by considerable grade increase, which occurred in the main between 1992 and 2000. Comparing 1992 and 2006, the average increases in the rates of A and B grades in the ten most popular subjects were 520% and 95% respectively. The trends at ordinary level within individual subjects are much more variable than at higher level.

An additional pattern of grade increase was identified at both levels. Within each letter grade band the rate of grade changes were skewed towards the upper end, with, e.g., a descending order of increase across A1 and A2 and across B1, B2 and B3. The pattern was discernible to some extent in all grade bands with the Fail and D bands showing higher rates of *decrease* at the upper end.

That very considerable grade increase occurred over the period under examination is beyond dispute. Whether this increase is due to improved scholastic performance or to grade inflation is discussed below.

6.2 What Might Cause Grade Increase?

Grade increase of the extent detailed above could in principle come about in a number of ways. The ability profile of successive cohorts doing the Leaving Certificate could have improved. The quality of education could have improved dramatically. Students could have grown more motivated and put in more effort. Alternatively, standards could have slipped and better grades could have been attained more easily. The latter is the grade inflation option.

The various alternative explanations will be considered.

6.3 Participation Rate in the Leaving Certificate

One possible source of a significant and ongoing improvement in the ability of successive cohorts taking the Leaving Certificate examination in the years between 1992 and 2006 would be a progressive decline in participation rates, if it disproportionately impacted on academically weaker students.

There has, however, been no such decline since the early 1990s. Figures available on the Department of Education and Science Website show an estimated rate of retention at second level of 70% in 1990, rising to 76% in 1995, 78% in 2000 and 81% in 2005. (DES, 2009). It is clear then that over the 1992-2006 period under examination here, participation rates in the

Leaving Certificate grew considerably. Since there is a strong pattern in Ireland of academically weaker and less motivated students being those more likely to drop out of education (NEWB, 2007), the effect of such an increased retention rate should be to exert a depressing effect on grades particularly in the ordinary level.

A higher Leaving Certificate participation rate makes it more difficult to explain the level of grade increase described above.

6.4 Shift from Higher to Ordinary Level?

Another possibility is that there has been a significant shift among successive cohorts of students from the higher to the ordinary level examination. If the more marginal (in academic terms) higher level students were tending as time passed to opt instead for lower level courses, this should have the effect of improving the average ability at each level.

Table 7: Number taking higher and ordinary subjects and ratio between the two 1992 and 2006

		Higher	Ordinary	
		N	N	Ratio Ordinary: Higher
English	2006	30445	17961	0.59
	1992	26685	27236	1.02
Maths	2006	9018	35113	3.89
	1992	6225	27236	4.38
Irish	2006	12948	26437	2.04
	1992	11061	36984	3.34
French	2006	13421	14388	1.07
	1992	16105	18601	1.15
Biology	2006	17048	7839	0.46
	1992	14416	11327	0.79
Geography	2006	17793	6868	0.39
	1992	13782	7445	0.54
Business	2006	12857	6568	0.51
	1992	12750	9752	0.76
Home Economics	2006	8202	4103	0.50
	1992	12731	5606	0.44
History	2006	6975	3702	0.53
	1992	7616	5401	0.71
Art	2006	7440	2541	0.34
	1992	6393	4037	0.63
Total	1992	127764	153625	1.20
	2006	136147	125520	0.92

Not only would the more select higher level students remaining not have their grades diluted by the marginal performers but the lower level would experience a lift due to the intake of those whose ability suggested they might have been fit to cope with the higher level courses. Table 7 above lists the number of students taking the higher and lower level papers in

each of the ten subjects in 1992 and 2006 and the ratio of higher to ordinary students in each case. It also lists the ratio of ordinary level to higher in each year for each subject and for the total across all ten subjects

Between 1992 and 2006 there has, indeed, been a considerable shift but in the opposite direction to that which would have been expected from the level of grade increase. Across all subjects for every higher level candidate in 1992 there were 1.2 ordinary level candidates. In 2006 for every one higher level, there were only 0.92 ordinary level candidates. The proportion taking higher level papers had outstripped that taking the lower level. The shift from ordinary to higher level occurred in every subject except Home Economics.

This should have had a depressing impact on grades and since the shift from ordinary to higher level examinations has been substantial the impact should also have been substantial. The influx of more marginal academic candidates into the higher level should have lowered the average grades at that level. At the same time the loss of those at the more able end from the ordinary examinations should have also depressed those averages.

This finding renders very difficult any legitimate explanation for the grade increase. It would require a remarkably significant transformation in learning achievements in the second level system because, not only were there major improvements in grades at both higher and ordinary level, but this was achieved against a backdrop of diluted ability in each group.

6.5 Has Second Level Education Improved Dramatically?

It is not to be doubted that second level teachers have redoubled their efforts in the face of an intense focus on the point's race for entry to third level education over the period in question.

There have also been some significant other developments over the period in Irish second level education, most notably the growth of private schools and particularly those known colloquially as 'crammer schools' dedicated to maximising the examination performance of more motivated students with a focus on competing successfully in the CAO points' race. It is widely accepted that a major growth in privately funded 'grinds' or extra tuition outside school has also occurred, though to what extent has not been quantified.

It is inevitable that such developments would have an impact on Leaving Certificate performance, though the crucial question remains whether the educational impact extends beyond that specific examination performance and whether it is possible to explain such a large transformation in grades in this way alone. The real possibility exists that the upper end of second level education has become a kind of examination preparation process

with more and more teaching and preparation effort dedicated to figuring out how to extract every last mark from the examination process.

6.6 The Case of Mathematics

Maths offers an instructive example of how Leaving Certificate grades do not appear to be matched by genuine competence. The standard of maths at entry to college has given particular rise for concern among third level academics. (Gill, 2006; Cleary 2007; Hourigan and O'Donoghue 2007).

Cleary (2007), in a study of mathematical skills among first year engineering students at IT Tralee from 1997-2006, found that those students with a D in ordinary level mathematics stood only a 21% chance of getting through year 1. Those with a C in ordinary level maths only stood a 45% chance of getting through. Unless students had a B or an A in ordinary level maths or had passed higher level maths in the Leaving Certificate, their chances of coping with the demands of first year engineering national certificate courses were poor. Similar findings for degree level courses were obtained by Gill (2006).

Why do those with a pass in mathematics in the Leaving Certificate still have insufficient maths knowledge and skill to cope with the demands of third level? The answer seems to lie in an inordinately narrow focus in teaching on simply getting through the Leaving Certificate exam. In a survey of 78 first, second and third year engineering students, 33 reported that their teacher had omitted one or more topics from the maths course and 25 reported that they had done so themselves (Cleary, 2006). An observation study of maths teaching in secondary school concluded the following:

“While Mathematics teachers, like all other subject teachers, are endeavouring to achieve whatever ‘is in the best interest’ of his/her pupils, the national obsession with the State examinations means that many teachers see their primary function as preparing their pupils for this vital exam. Unfortunately though, in doing so, teachers are narrowing such pupils’ future potential, as exam-driven practice generally results in regimental thinking, limited problem solving ability and a lack of self-confidence and perseverance in the face an unseen/different challenging problem. The limitations of a quick-fix, teacher-led didactic approach, which has the terminal exam as a primary focus, means that the ‘typical’ pre-tertiary mathematics experience fails to provide pupils with the necessary foundations for everyday life, not to mention Tertiary Level mathematics courses.” (Hourigan and O'Donoghue, 2007)

Similar sentiments are expressed in a statement in a recent report of an NCCA consultation process about post primary mathematics which had been prompted by “concerns about the low level of mathematical skills displayed by students emerging from post-primary schools:”

“Most of the responses in the consultation identified the rote learning of mathematics, particularly of procedural techniques specifically aimed at

answering predictable types of examination questions, as one of the major problems that must be overcome.” (NCCA, 2006, p.1)

Even the Department of Education and Science Chief Examiner for Mathematics has expressed considerable misgivings about the standard of competence being achieved by students in the ordinary level. His 2000 report contains the following observations:

“There is a significant weakness regarding sound conceptual understanding of much of the material, with corresponding weaknesses in its application in contexts which, though familiar, do not mimic well-rehearsed examples precisely, or do not contain the standard “trigger phrase”. It is particularly noticeable when more than one idea or skill is involved. This indicates that objectives C and D, relational understanding and application, are not being as well achieved as might be hoped. This is the case not only with advanced material, but also with quite fundamental concepts and skills. Worthy of particular note here is the extent to which basic algebraic skills manifest as isolated mechanical procedures without underlying understanding or synthesis. Whereas this is often sufficient for survival with very familiar routine exercises, it is a serious disadvantage when any degree of higher order application is required.” (Chief Examiners Report for Maths, 2000, p32)

While the case for grade inflation is, of all subjects, weakest in Maths with no obvious pattern of grade increase since the early nineties, the point here is that it illustrates that the predictive validity of Leaving Cert grades must be doubted. Grades that should indicate a certain standard of competence do not seem to do so. A similar conclusion is strongly suggested below with respect to Irish.

6.7 The Case of Irish

Commenting on the feedback from public bodies to him that their employees are unable to deliver services through Irish, An Comisinear Teanga, makes the following points:

“It is estimated that almost 1,500 hours of tuition in the Irish language is provided to school pupils over a period of 13 years, from their first day at primary school to the end of secondary level. This clearly raises the question: is the State getting value for money from this investment, if it is true that so many are going through the educational system without achieving a reasonable command of the language – even in the case of students who succeed in getting a high grade in Irish in their final examinations? I believe that there is an urgent need for a comprehensive and impartial review of every aspect of the learning and teaching of Irish in the educational system.....” (An Comisinear Teanga 2004, p7)

With proportionately more candidates opting for the higher level and 48.8% of those obtaining either an A or a B in 2006, it is difficult to understand why it is so difficult for organisations to find anyone competent enough in the language as to be able to deal with customers through Irish.

The answer appears to be that having a good grade in the Leaving Certificate is, as in the case of maths, poor evidence of genuine competence.

6.8 OECD PISA Studies

Another indication that all is not as it should be in the Leaving Certificate examination is the failure of the Irish samples in the OECD PISA studies to show any improvement in reading, maths or science between 2000 and 2006 (Eivers, Shiel, & Cunningham 2008). This involves a representative sample of 15 year olds being tested in a standardised way to allow for comparison across Europe.

It is to be expected that ongoing improvements in education leading to such improved Leaving Certificate grades ought to show up to some extent at age 15. The absence of any such signs suggests that grade inflation is a more plausible explanation than educational improvements.

6.9 Relevant Social Trends

A trend that has accompanied economic development in Ireland in the nineteen nineties and into the twenty first century is a growth in part-time employment among second level students. Increased time and energy devoted to earning and spending money is unlikely to be congruent with increased educational effort. Morgan (2000) found that three quarters of post primary students (excluding transition year) in Dublin had part-time jobs. One tenth worked as many hours as they spent at school. Very little of the motivation to work related to economic necessity with only 5% reporting that they contributed in any significant way to the family and most of the income generated being described as spent on entertainment, holidays, fashion, and alcohol.

Commenting on the survey results Dr Morgan states:

The present results demonstrate how the country's economic success is having an adverse effect on the educational system, especially on those young people who will be most vulnerable in the event of an economic downturn (Morgan, 2000, p. 5).

A subsequent ESRI study revealed that, nationwide, the combining of school and part-time work was the norm, with over 60 per cent of Leaving Certificate students having a regular part-time job (McCoy and Smyth, 2004).

A closely related trend associated with Ireland's economic boom and the availability of money among secondary school pupils is the growth in alcohol use and abuse. That we have come to top the international charts

in teenage binge drinking, once again does not suggest an increased dedication to school work. A variety of surveys have shown that the age of commencement of drinking has gone down significantly over the last decade and a half, while the frequency and level of drinking among young people has increased very substantially (Morgan and Grube, 1997; ESPAD, 1995, 1999, 2003).

The findings of the most recent ESPAD survey in 2003 are particularly striking. It compared nationally representative samples of 15-16 year olds at school across 32 countries/territories in Europe including Greenland and Turkey, gathering detailed data about substance use. The Irish showed the second highest rate after Denmark of drunkenness with 30% reporting having been drunk at least 20 times. Over the previous 12 months, 72% reported being drunk at least once as against 53% for the complete European sample. Ireland also came third on the list for drinking the largest volume of alcohol on the last drinking occasion. The use at any time of marijuana or hashish was found to be nearly twice as common in Ireland (39%) than the average of the sample as a whole (21%). It should be noted that students were still under age 16 when the survey was taken. They had lots of time to increase their substance use before sitting the Leaving Certificate.

A national proclivity towards alcohol and drug use among secondary school students is hardly congruent with high educational achievement.

6.10 The Pattern of Grade Increase

The particular extent and pattern of grade increase reported above also suggests that grade inflation may be at work. The points' race and attendance at private educational institutions is much more likely to impact on those at the upper end of the academic achievement spectrum – those determined on competing for entry to high point faculties. This may well explain to some extent the increase in A and B grades in higher level papers. It is, unlikely, however to have had any impact on the reduction in fail and D grades in lower level papers. That grade improvement is so extensive and ubiquitous gives rise to suspicion.

The peculiar patterns identified above in grade changes also gives rise to suspicion. The fact that a major shift upwards across the grade bands is accompanied by greater growth at the upper end of the more desirable grade bands suggests that there is a system in operation that is determined, where an A or B does not seem merited, to at least award a high B or a high C in its place. It is also difficult to understand the remarkable symmetry between D and B grades without some kind of deliberate intervention. It smacks of post correction adjustment of grade proportions. If such a system is in operation, it is almost certainly grade inflationary in its effect.

7. Conclusion

The scale, pattern and virtual ubiquity of grade increase described above would on its own require a radical transformation in educational effectiveness. Seen in the light of the contemporaneous trends in second level retention, the shift from ordinary to higher level courses, the level of part-time employment among students and the level of drinking among senior cycle students, the grade increase appears inexplicable in educational terms. All that put together with the absence of any sign of the grades being matched by genuine improvements in academic achievement, leads inescapably to a conclusion that grade inflation is the dominant explanation for grade increases.

It is extraordinarily difficult to conclusively prove grade inflation in the absence of adequate comparison measures of learning. However, the burden of proof should rightly lie in the other direction. It should be incumbent on the Department of Education and Science or the Examinations Commission to demonstrate that the radically improving grades are warranted by genuinely improved learning and that sliding standards are not to blame. There is sufficient concern internationally about grade inflation and sufficient grounds to suspect it in the Leaving Certificate as to render complacency a non option.

Grade inflation can mask all kinds of educational deficits. There is no economic or social value in training generations of students in how to maximise grades in the Leaving Certificate. Examination grades should be an inevitable by product of education and learning and not the primary focus of the whole endeavour. To focus education around the examination undermines the predictive validity of grades which increasingly become nothing more than a measure of examination success. Moreover, the ceaseless effort to coach and teach to the examination renders education sterile, mechanistic and ultimately deeply unrewarding for both students and teachers. The alternative – a focus on education itself rather than examinations with an emphasis on genuine understanding rather than rote memory – would be so much less stressful and more fulfilling for students and for their teachers. It would also, of course, have infinitely more life long value.

In so far as education is relevant to our modern knowledge based economy and society at large, what it needs to produce are learners who can source, sift through, evaluate, interpret, apply and communicate information. There is no economic or social worth in producing individuals who can commit to memory and regurgitate pre-packaged information, which they ill understand and have no sense of how to apply in new situations.

All the signs are that grade inflation is hiding a serious decline in education. In the words of Professor James A. Slevin, in his President's address to the Royal Irish Academy:

“Faced with an examination system that encourages and rewards rote learning, the rational second level student concentrates on such shallow learning in place of developing more analytical skill”
(Slevin, 2008)

We as a nation can ill afford to be blinded to the risks of this educational decline. We must recognise the false impression of success that is created by grade inflation and immediately address the primary sources of this problem. The first step must be a radical overhaul of secondary education starting with the Leaving Certificate examination. It must become an assessment of genuine understanding and scholastic skill, supported by a syllabus and educational process that works towards that end. Most crucially of all, any changes in the style, format or marking of the Leaving Certificate must be designed to protect it from having its validity undermined in the way the current version would seem to have had.

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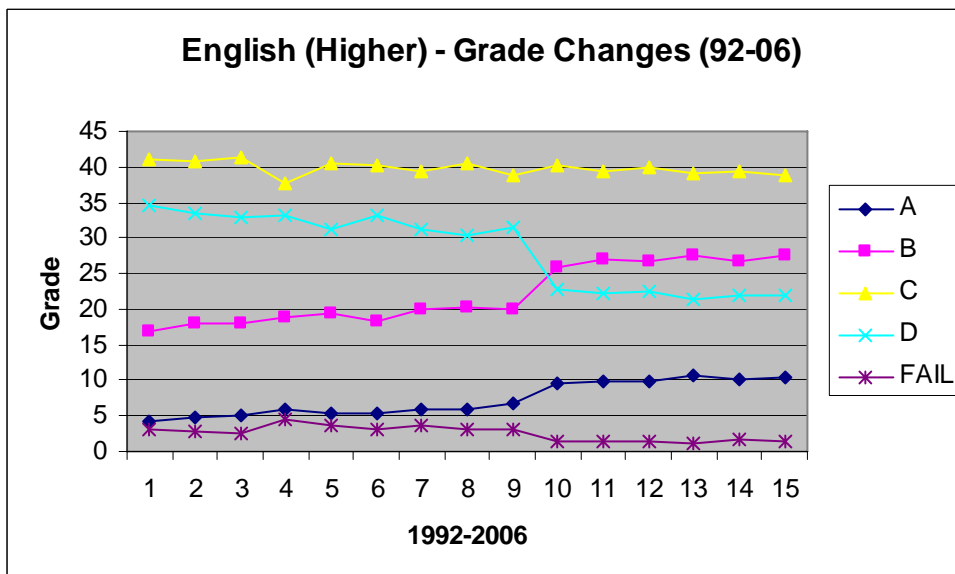
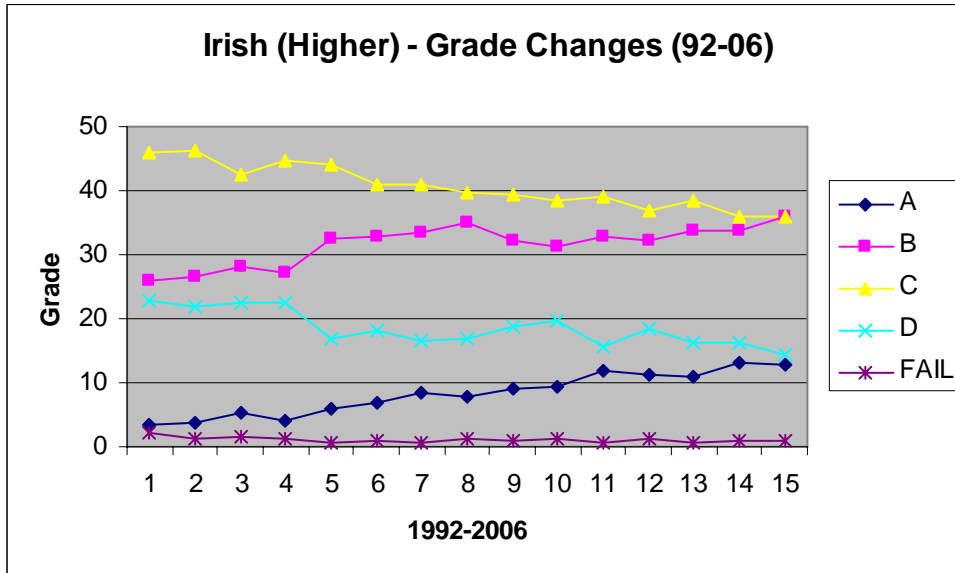
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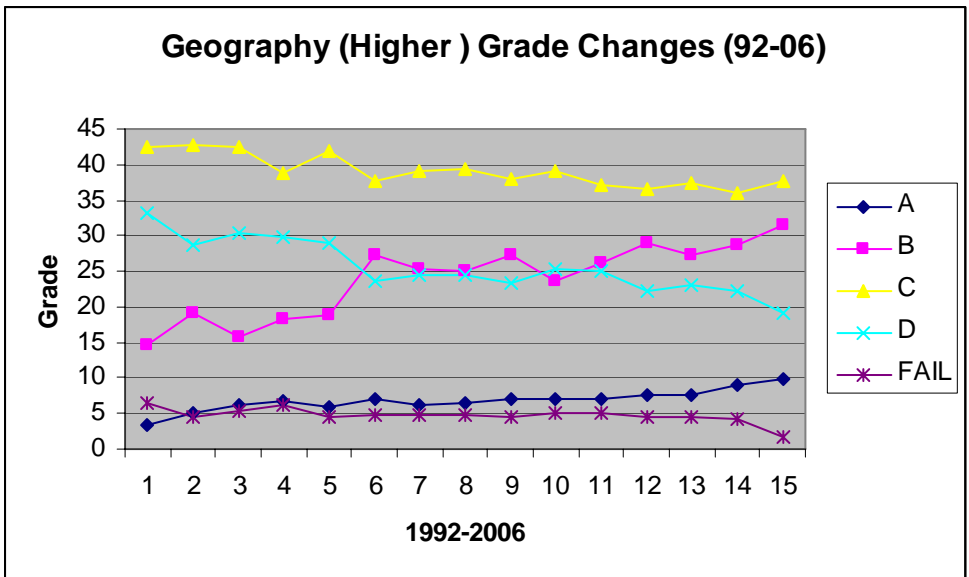
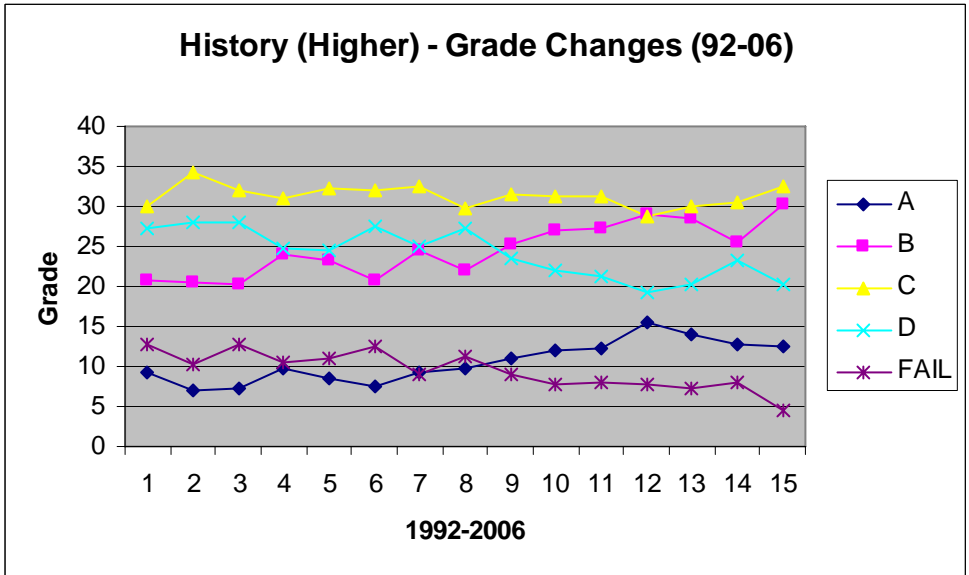
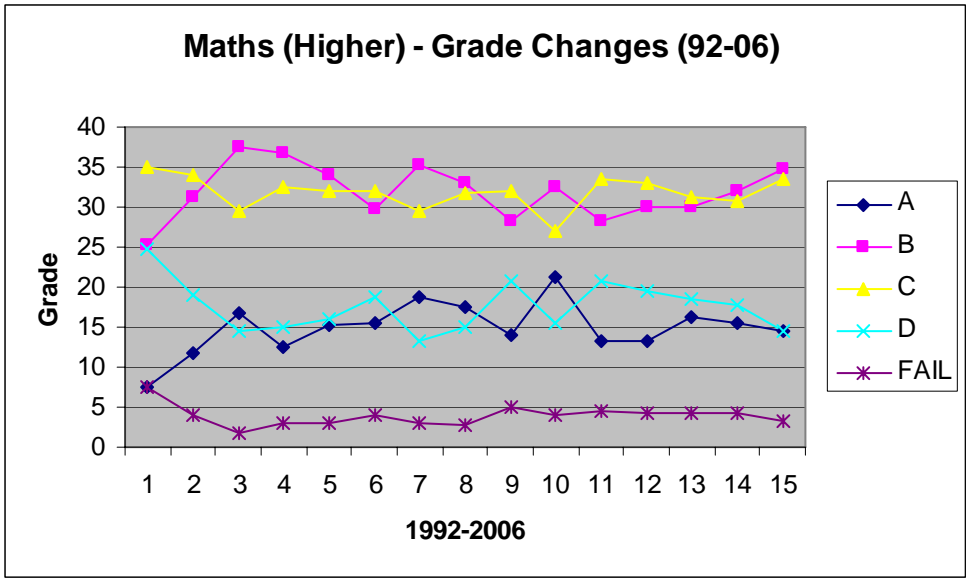
Sunday Independent, 2008, *Bringing up grades by dumbing down equals failure* by Emer O'Kelly, June 1.

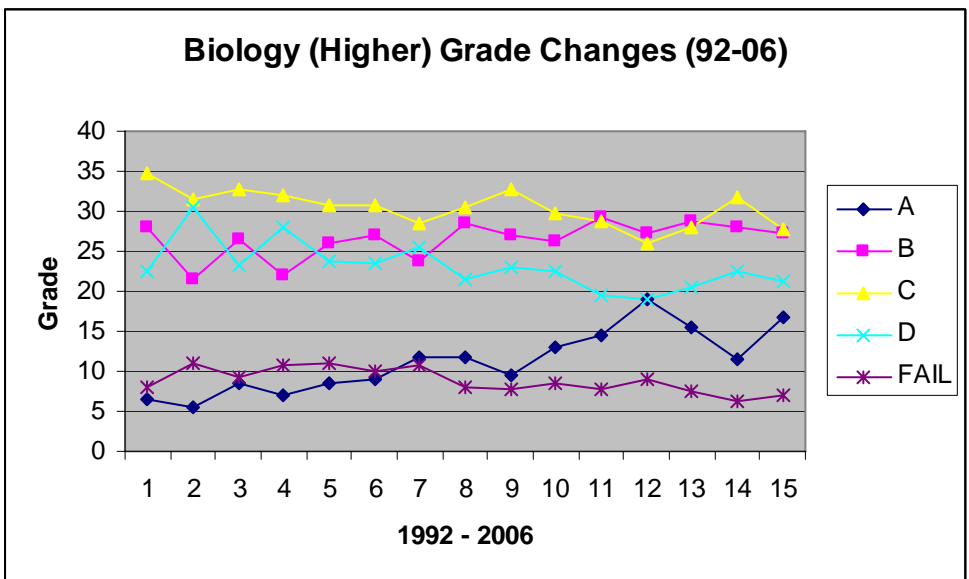
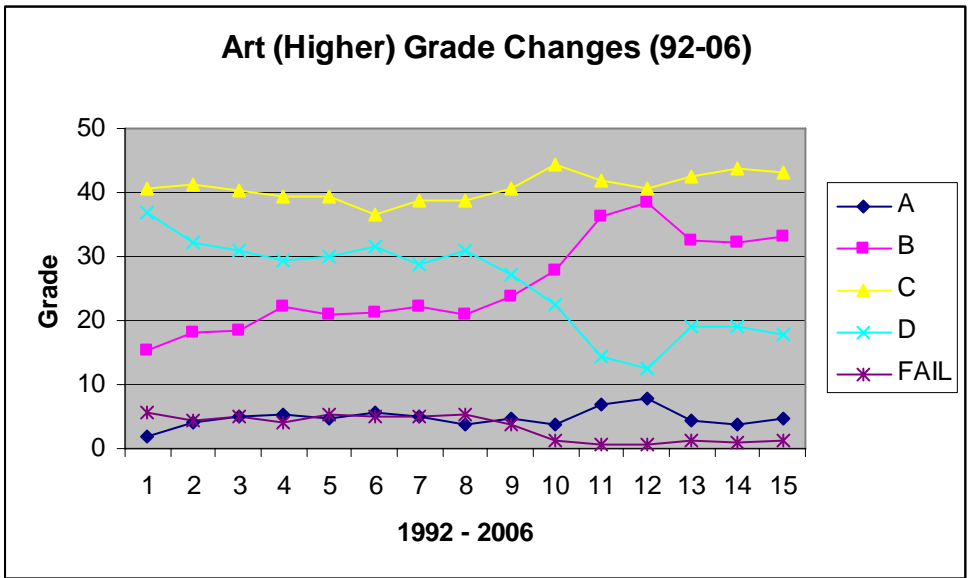
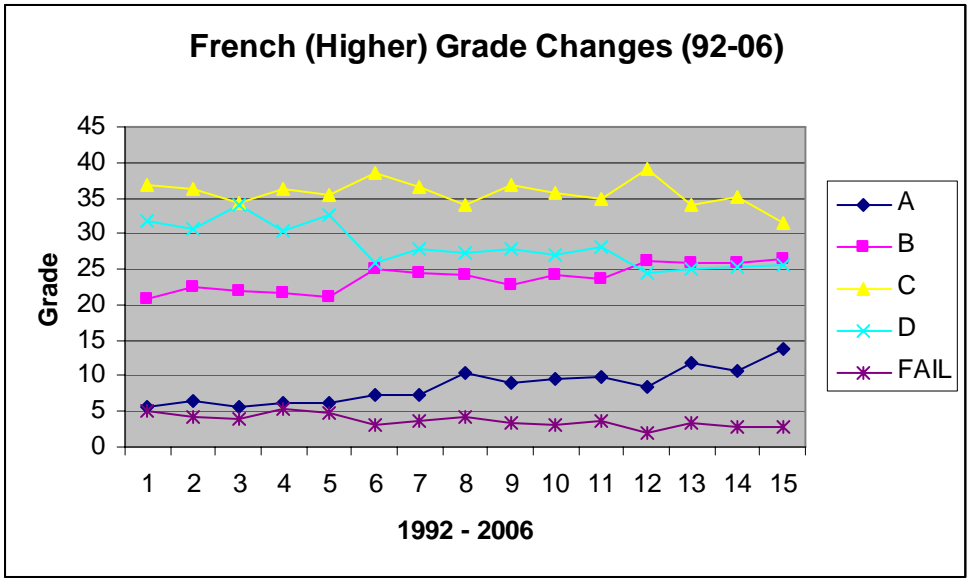
Sunday Tribune, 2007, *Comment – School kids make the grade but they don't make the cut* by Diarmuid Doyle, June 10.

APPENDIX 1

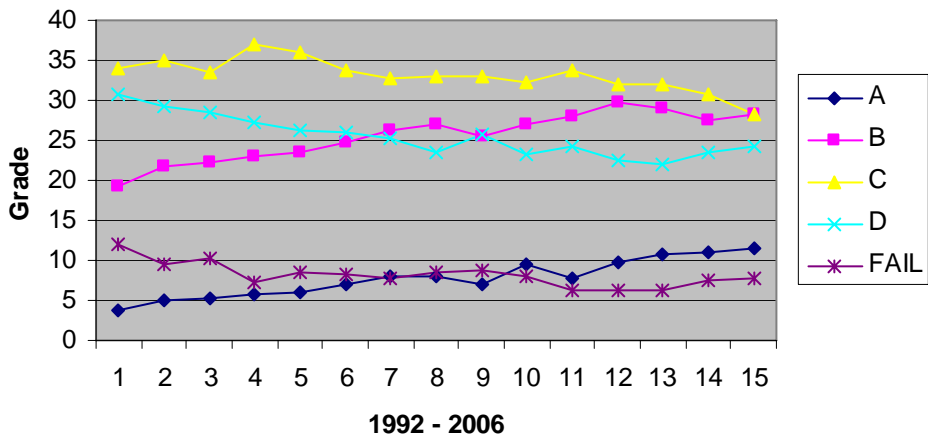
Grade Trends in Higher Level Subjects 1992-2006



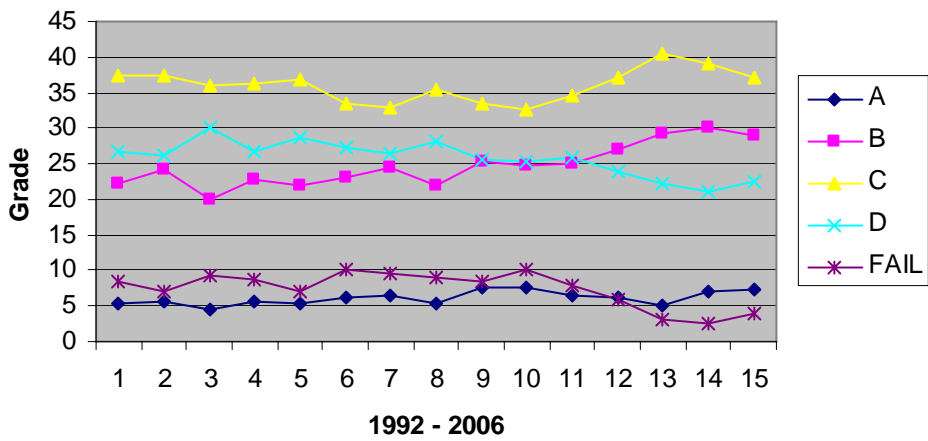




Business (Higher) Grade Changes (92-06)

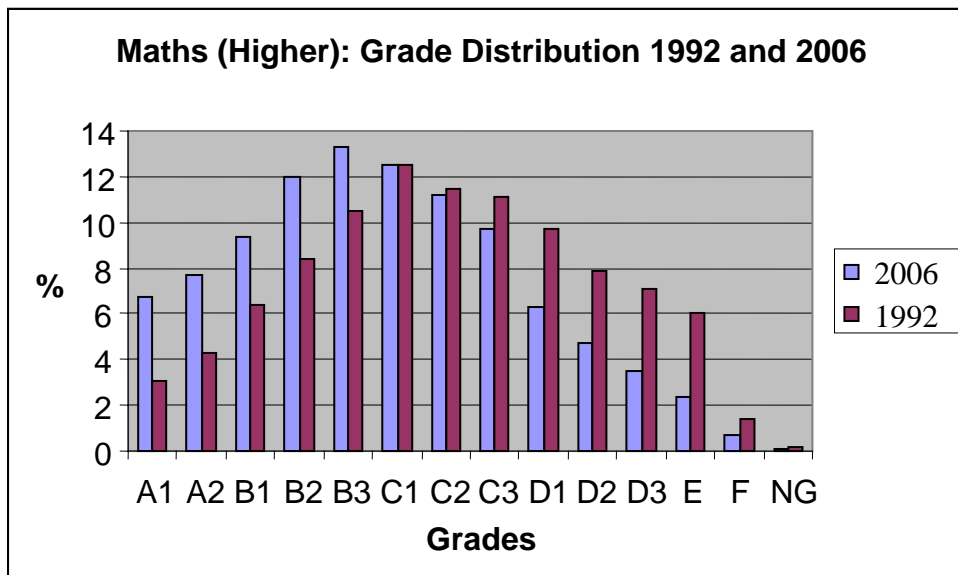
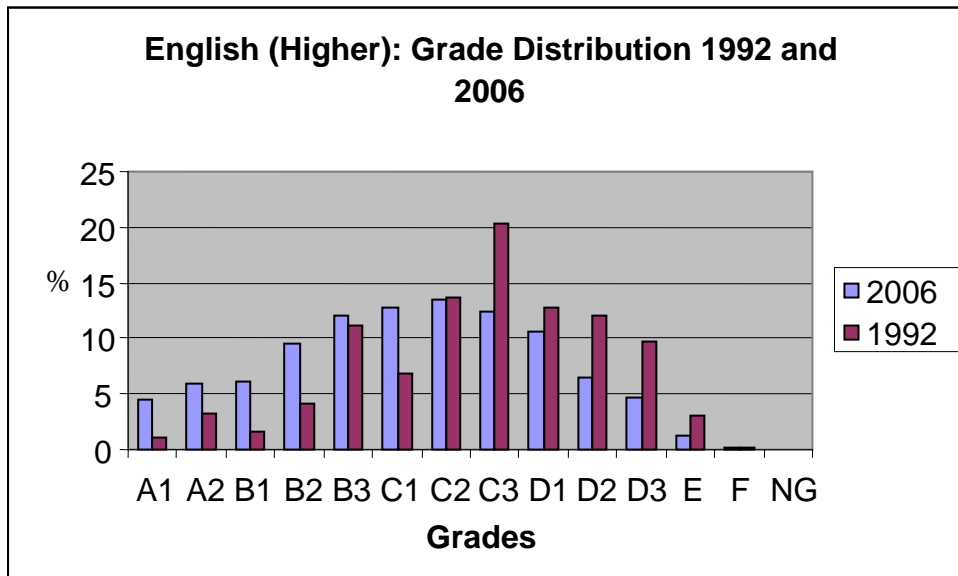


Home Economics (Higher) Grade Changes (92-06)

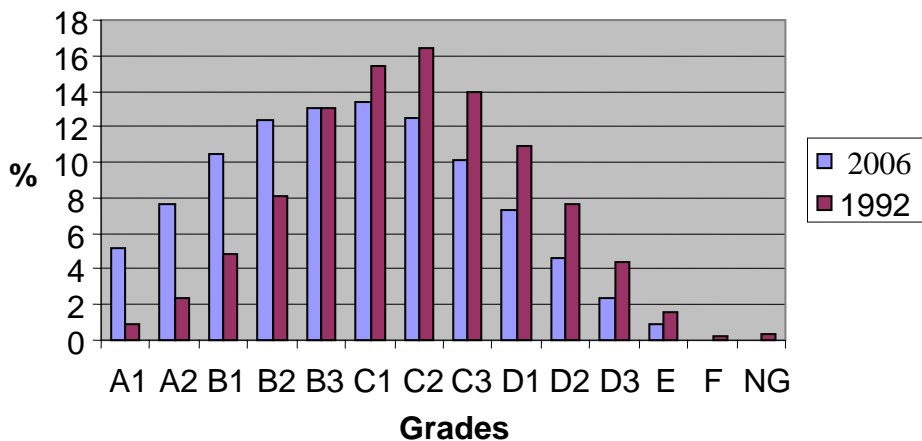


APPENDIX 2

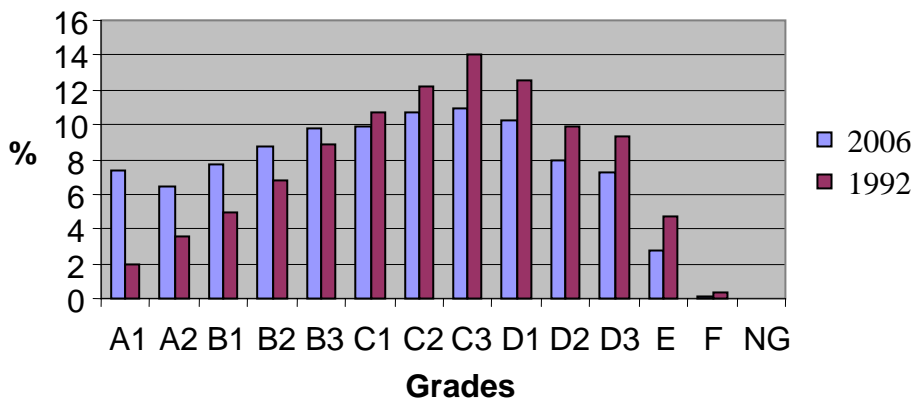
Higher Level Subject Grade Distributions 1992 and 2006



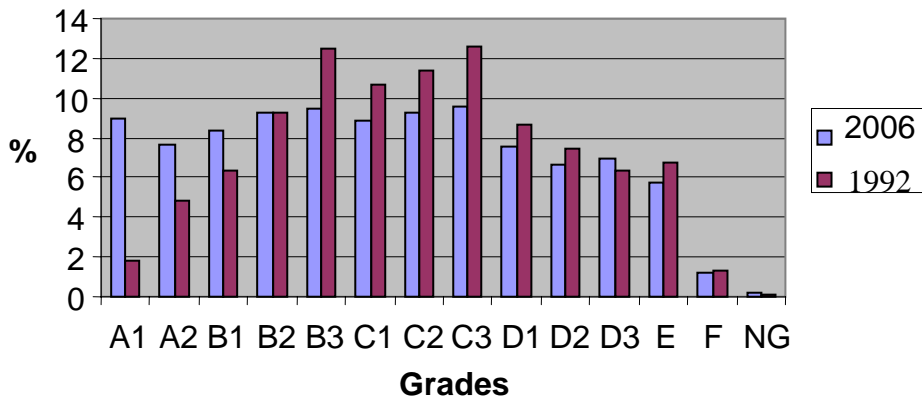
Irish (Higher): Grade Distribution 1992 and 2006



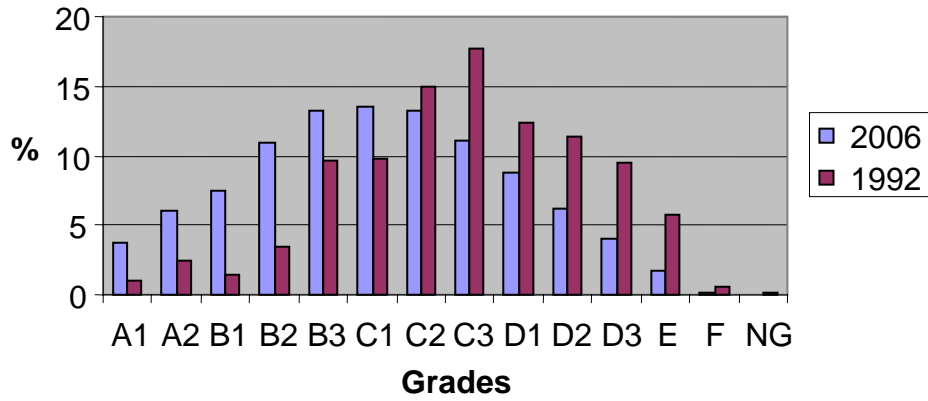
French (Higher): Grade Distribution 1992 and 2006



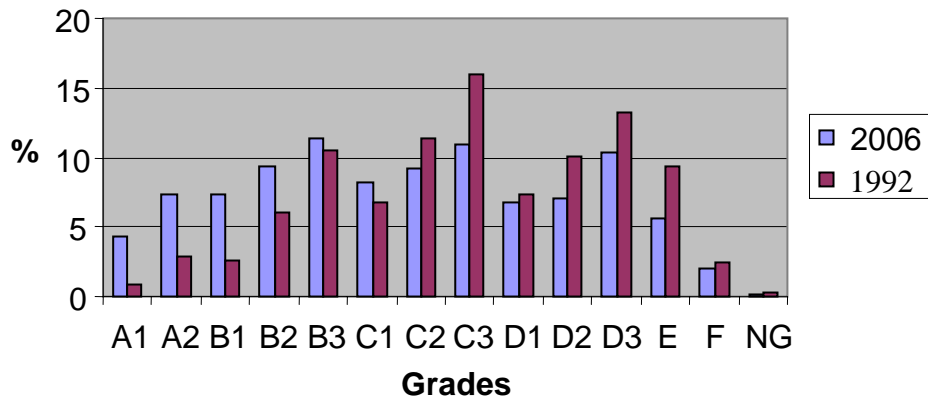
Biology (Higher) Grade Distribution 1992 and 2006



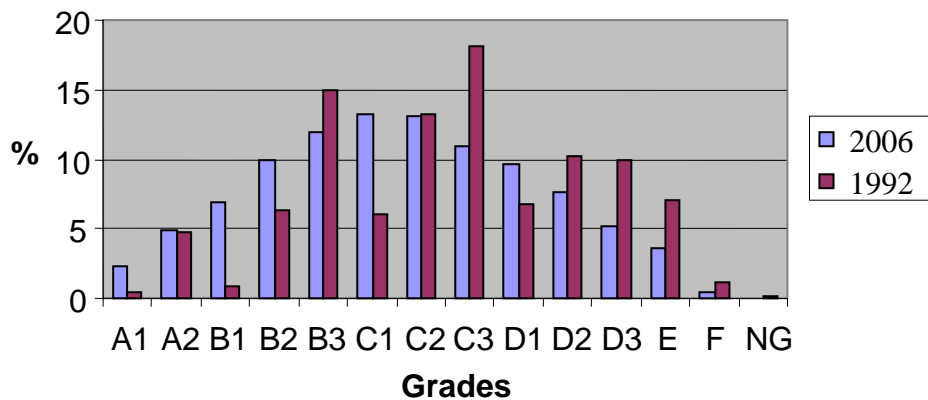
Geography (Higher) Grade Distribution 1992 and 2006



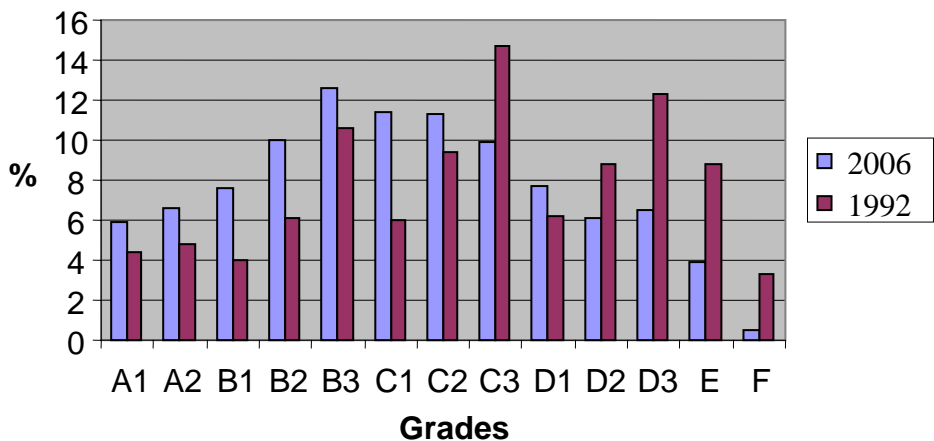
Business (Higher) Grade Distribution 1992 and 2006



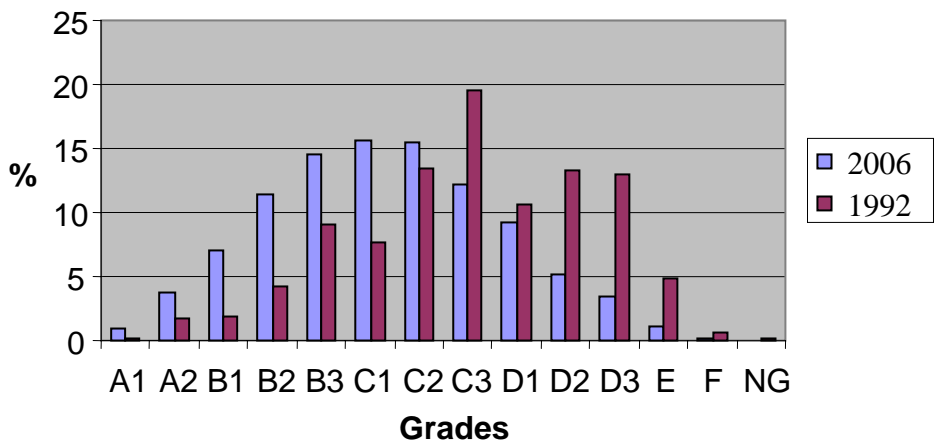
Home Economics (Higher) Grade Distribution 1992 and 2006



History (Higher) Grade Distribution 1992 and 2006

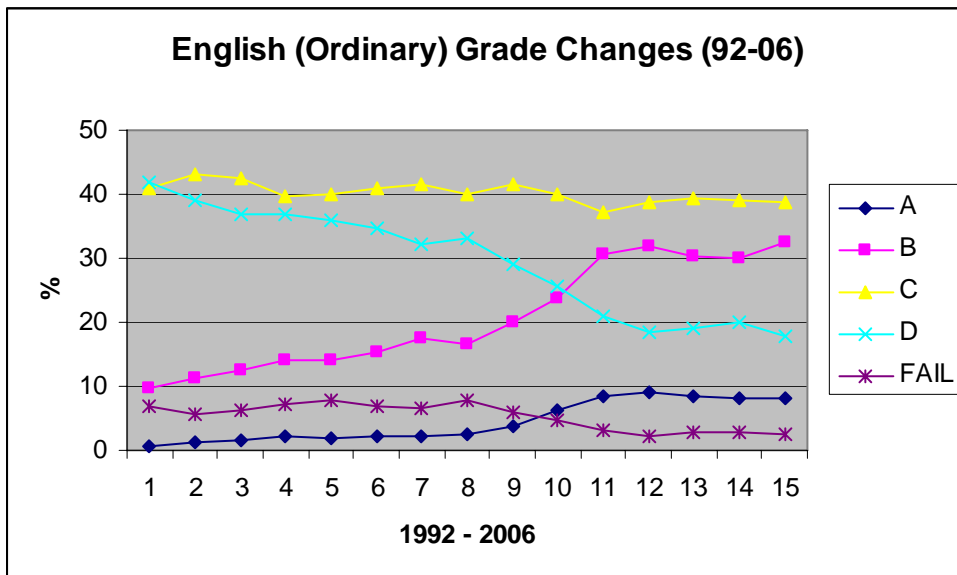
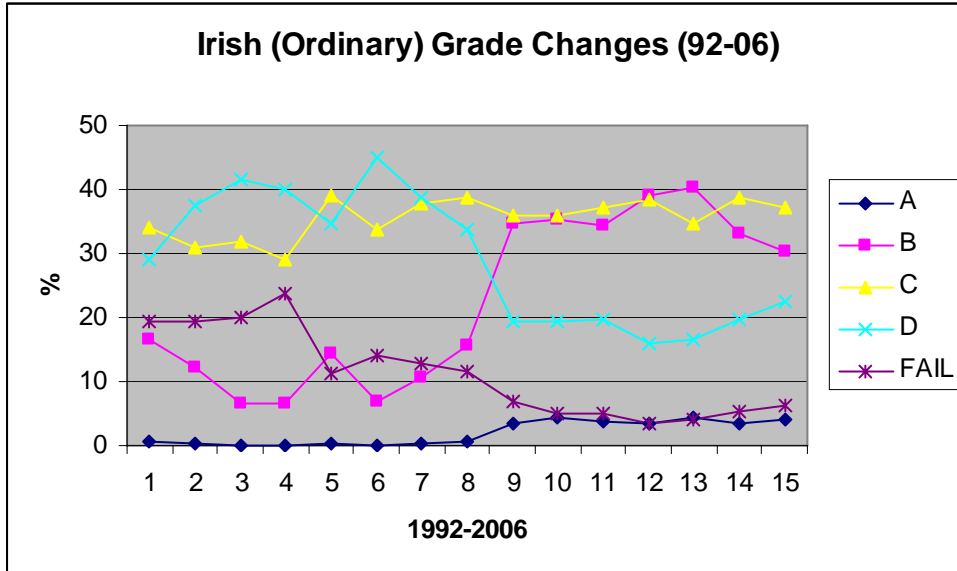


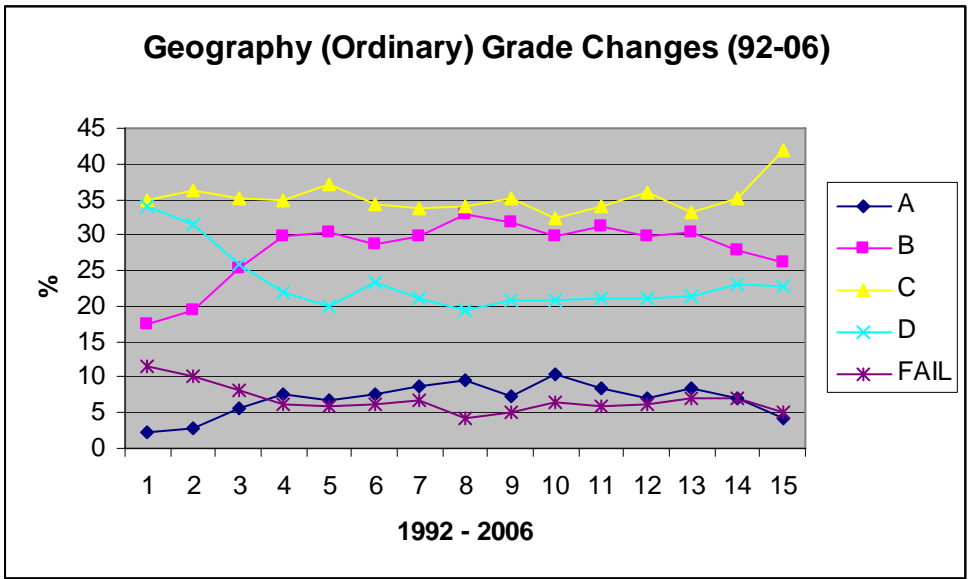
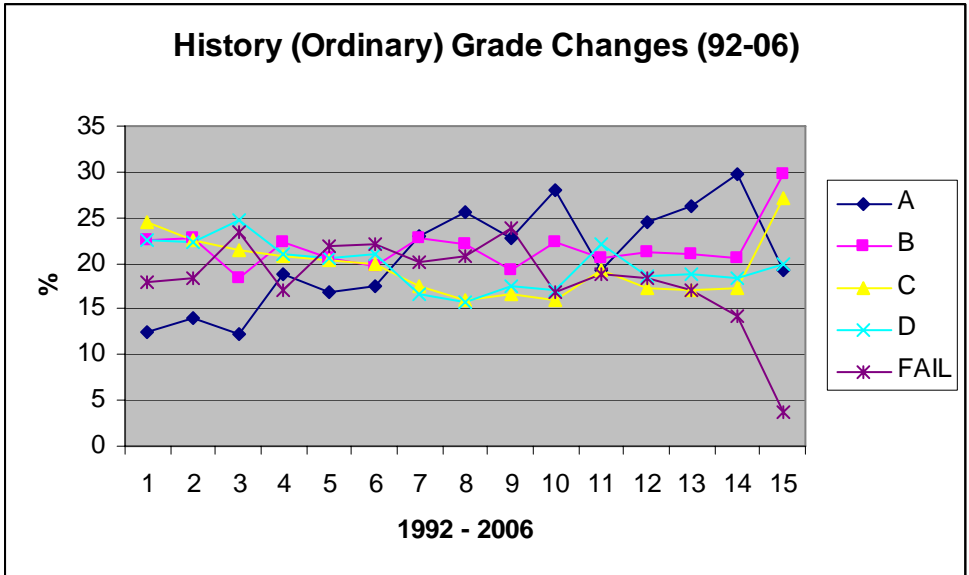
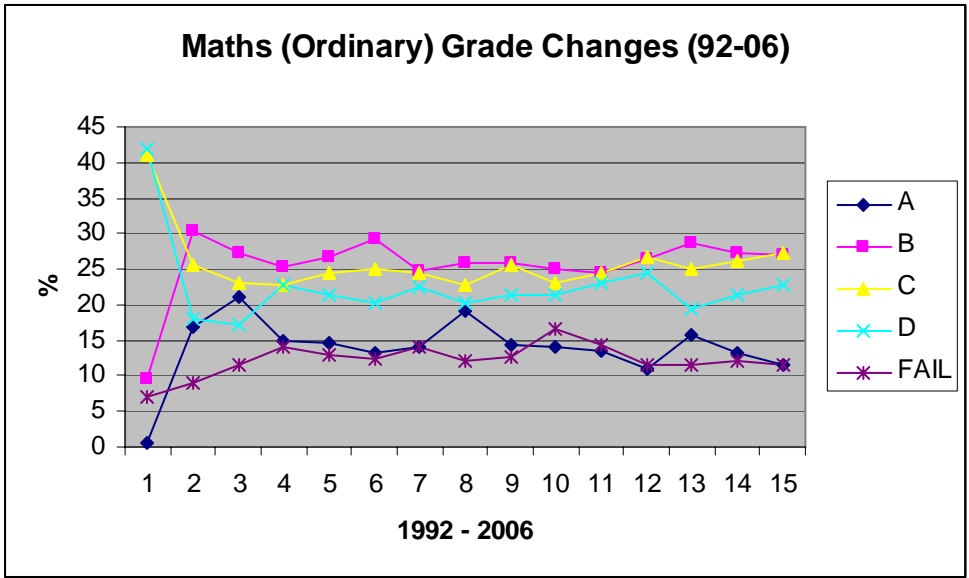
Art (Higher) Grade Distribution 1992 and 2006

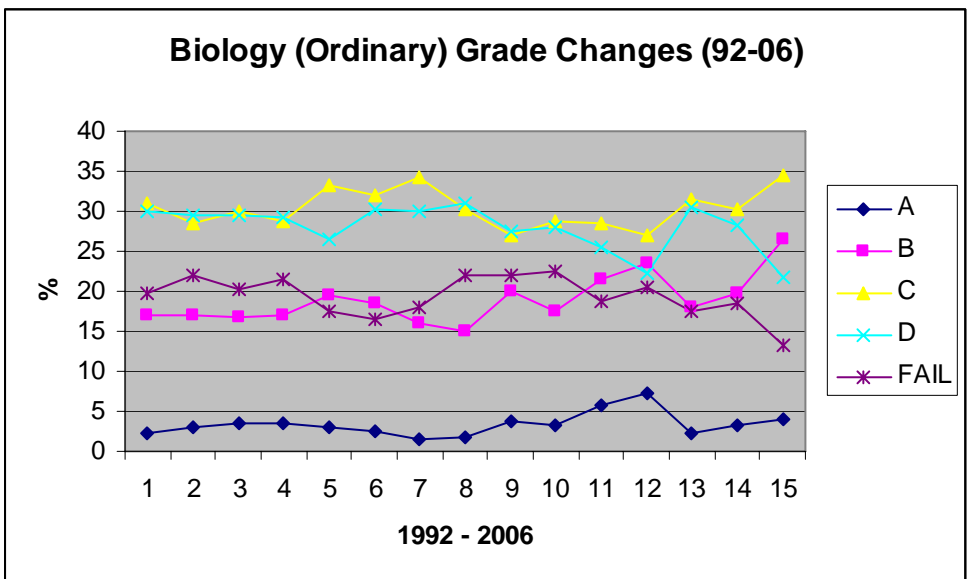
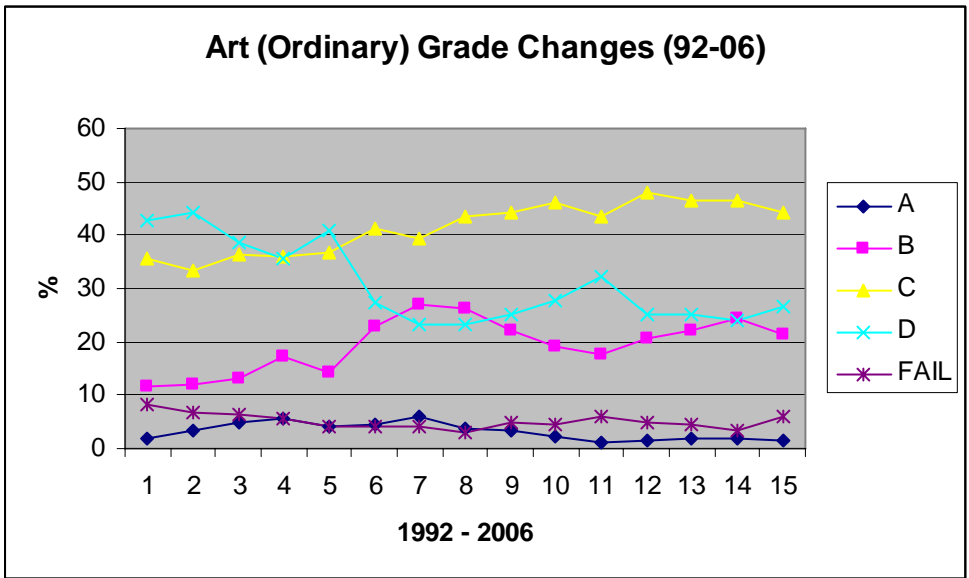
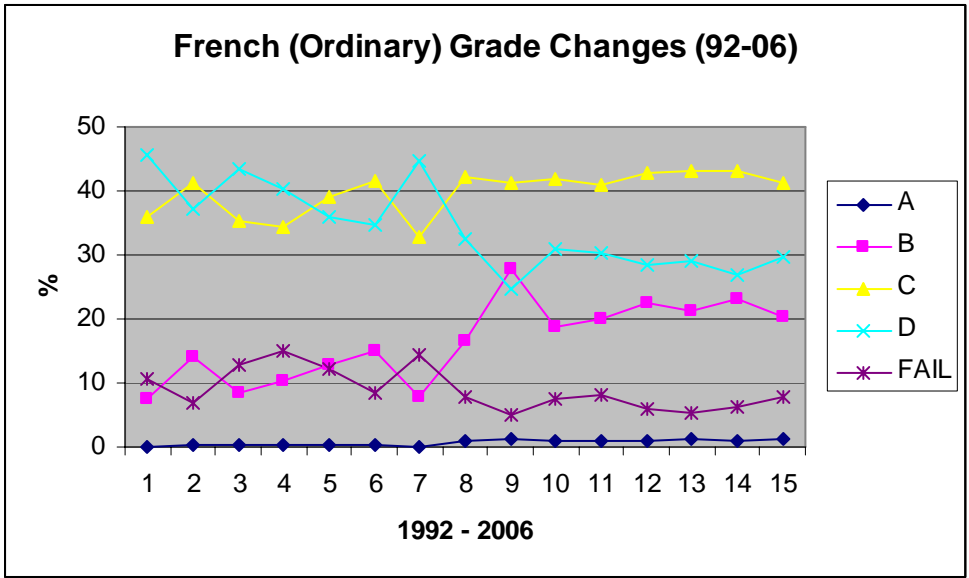


APPENDIX 3

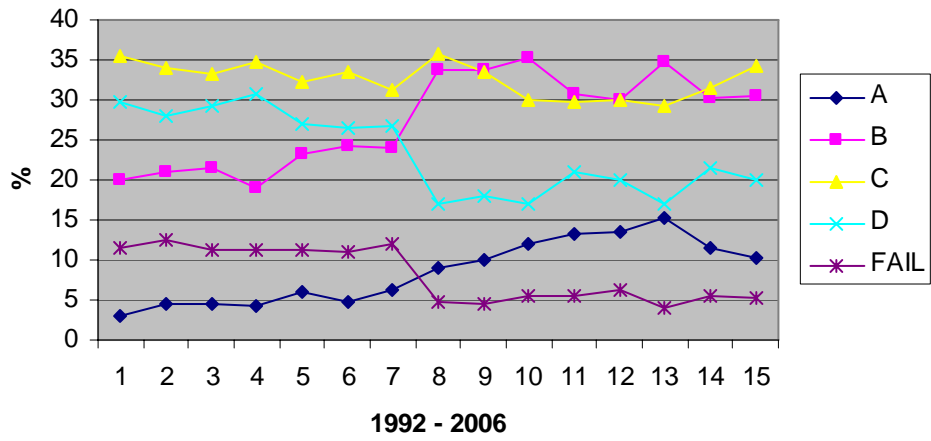
Grade Trends in Ordinary Level Subjects 1992-2006



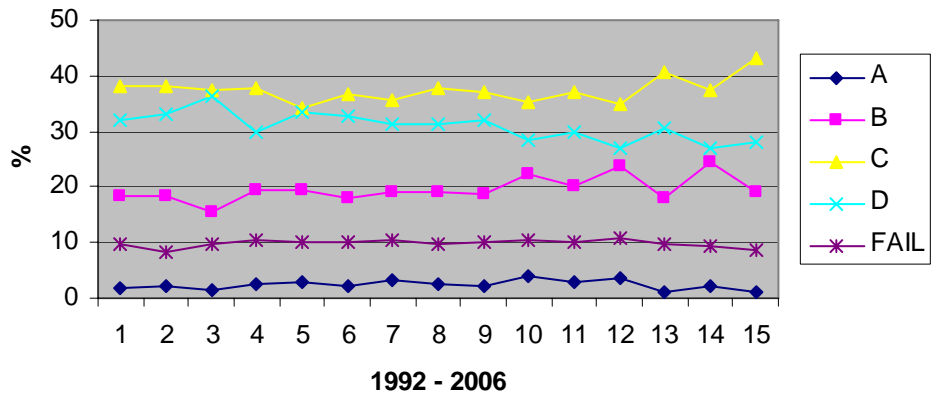




Business (Ordinary) Grade Changes (92-06)

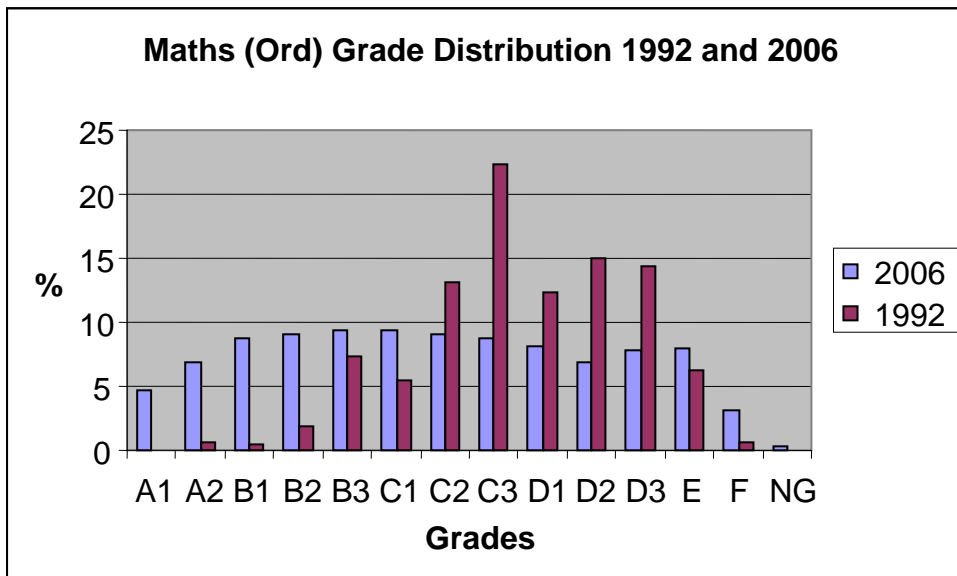
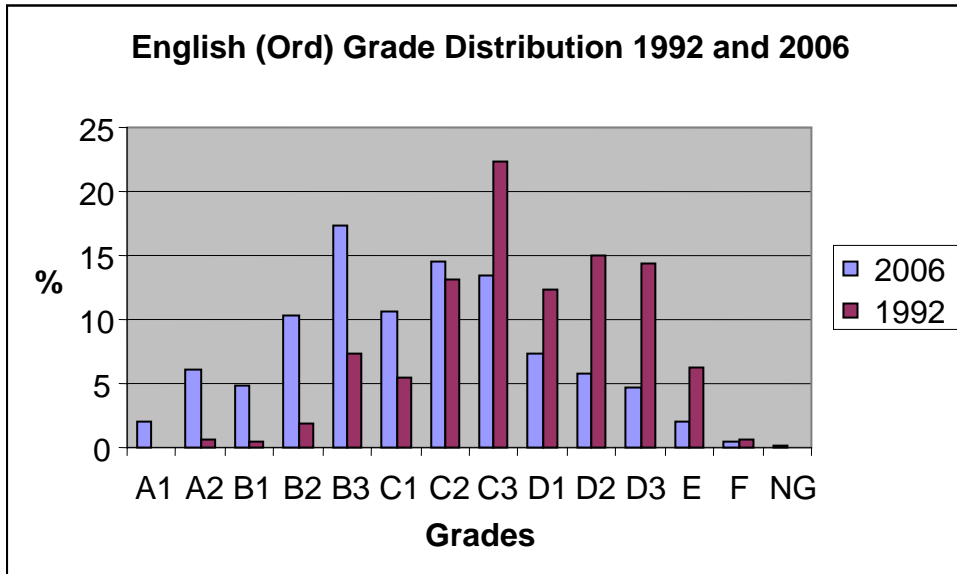


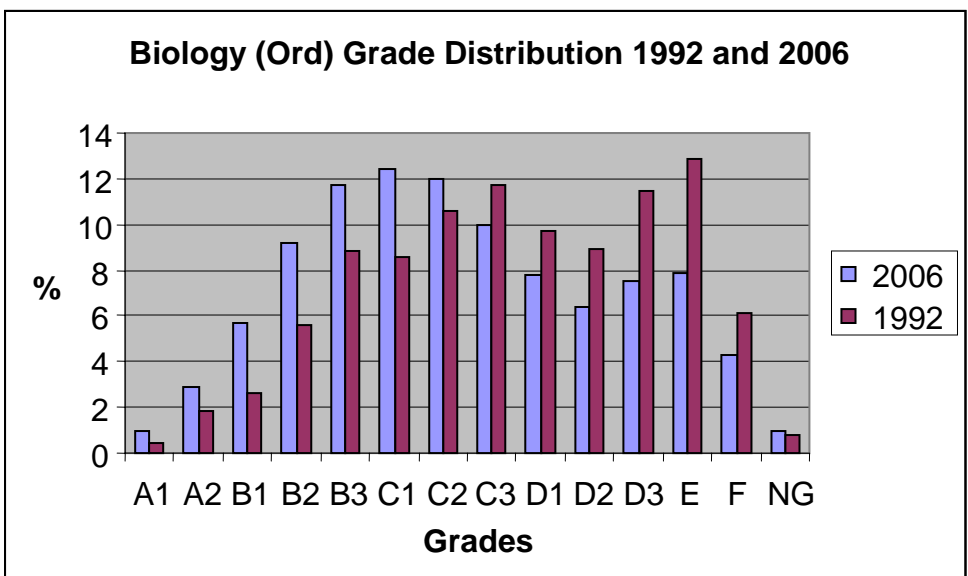
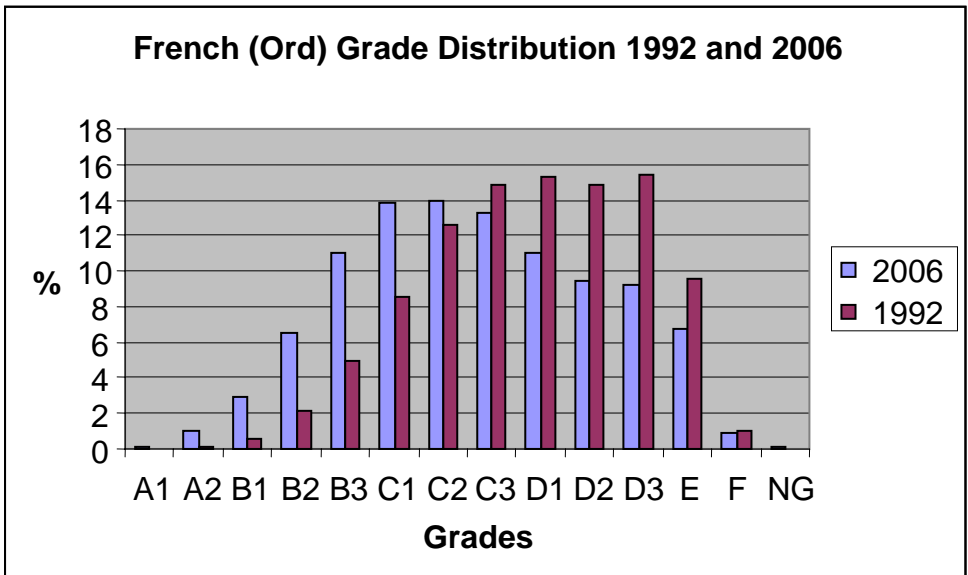
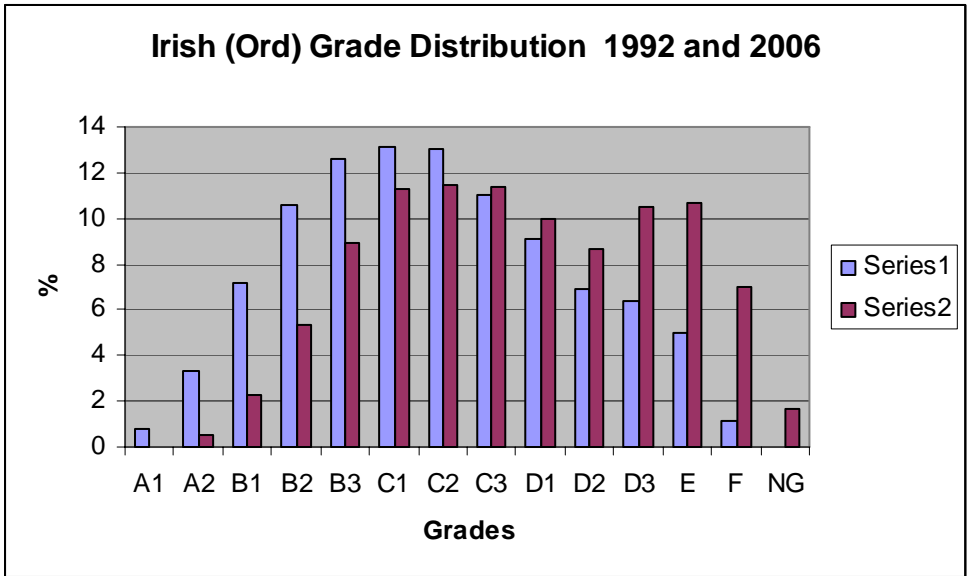
Home Economics (Ordinary) Grade Changes (92-06)



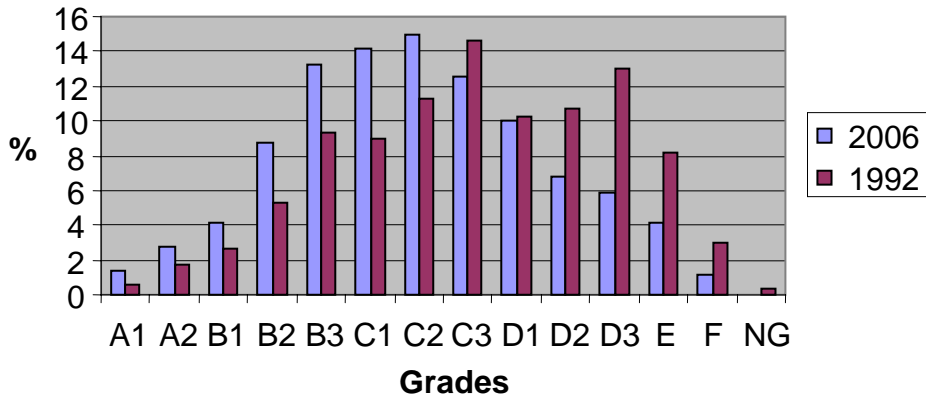
APPENDIX 4

Ordinary Level Subject Grade Distributions 1992 and 2006

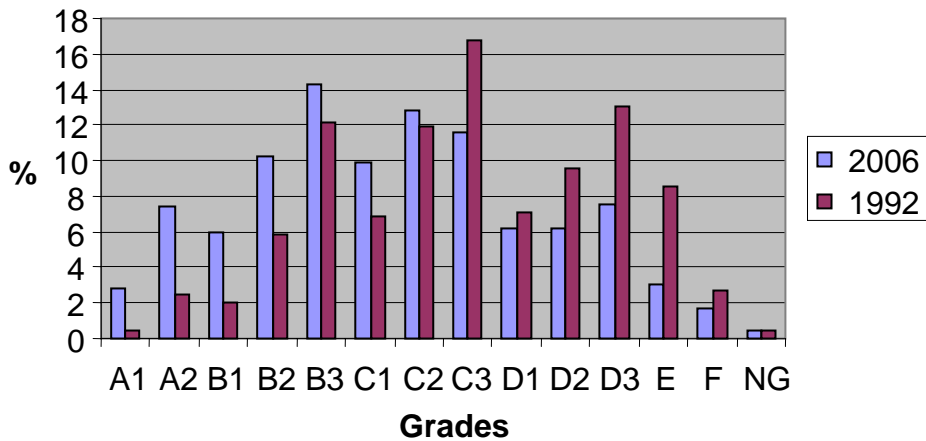




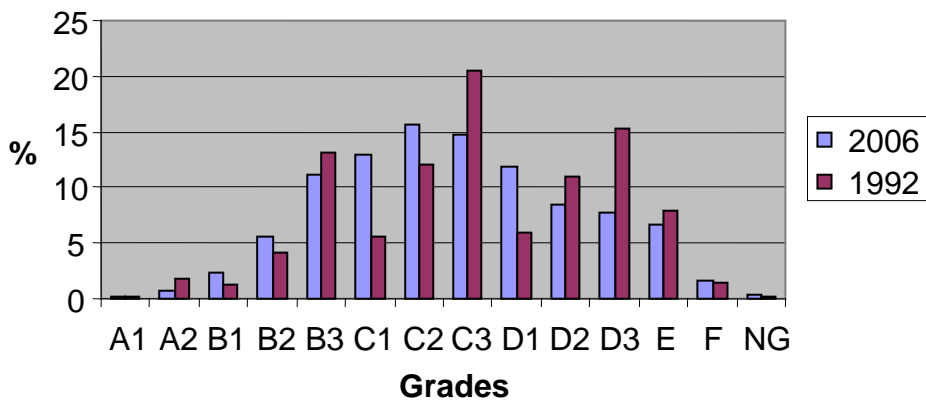
Geography (Ord) Grade Distribution 1992 and 2006



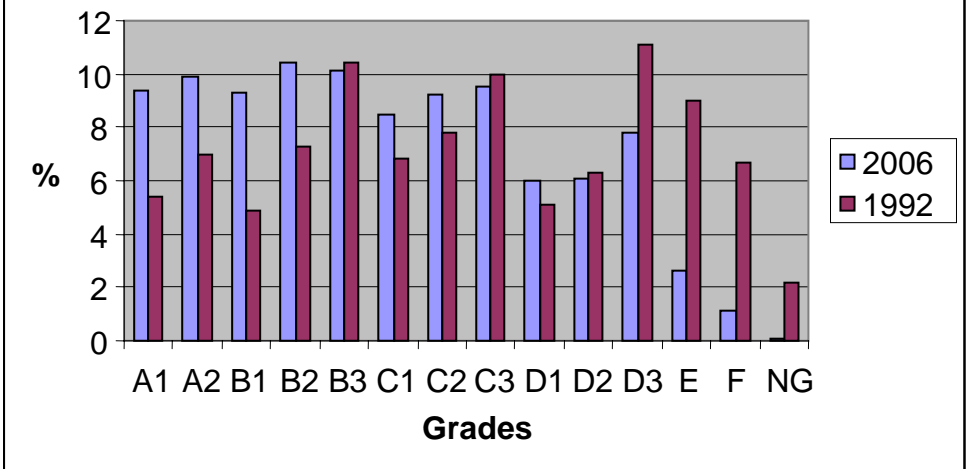
Business (Ord) Grade Distribution 1992 and 2006



Home Economics (Ord) Grade Distribution 1992 and 2006



History (Ord) Grade Distribution 1992 and 2006



Art (Ord) Grade Distribution 1992 and 2006

