



***Network for Irish
Educational Standards***

Paper 8

**Grade Inflation 2005-2008 in
the Institute of Technology Sector: Declining
Standards**

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Executive Summary

The present paper is an analysis of grade inflation in the Institute of Technology (IOT) sector for the period 2005-2008. It updates the 1994-2004 analysis conducted by O'Grady and Guilfoyle (2007a). All NFQ Level 6, 7 and 8 awards within the IOT sector, excluding those from the Dublin Institute of Technology, are included in the analysis.

The percentages of top grade awards (First Class or Distinction) and of the combined top two grades (First + 2.1 or Distinction + Merit1) were computed for the 13 IOTs in aggregate, for each IOT separately and for each of the four disciplines of Business, Engineering, Humanities and Science/Technology.

To identify a pattern of change in the rate of higher grades awarded over the period, the average of the 2007 and 2008 rates were compared with the average of 2003 and 2004. Between the two periods the percentage of the combined top two grades increased at all three levels: by 13.5%, 6.7% and 16.9% at Level 6, 7 and 8 respectively. The top grade increased at Level 6 by 7.1%, at Level 8 by 15.7% but decreased at Level 7 by 11.1%. The rates of change in the higher grades fluctuated widely between Institutes varying from large increases of over 50% to large decreases of a similar order. Calculated by discipline for the top two grades combined at Level 6, Science/Technology (+40.4%) and Business (+15.7%) accounted for all of the grade increase. The percentage of the top two grades combined fell in Engineering (-3.5%) and in Humanities (-7.6%). In contrast, at Level 7, Engineering (+16%) and Humanities (+27.7%) accounted for the bulk of grade increase with Business (+0.5%) and Science/Technology (+2.2%) showing only negligible increases in the higher grades. At Level 8, Business (+15.8%), Engineering (+24.8%) and Science/Technology (+25.9%) all showed substantial increases in the combined top two grades but there was only a relatively minor increase in Humanities (+4.1%).

Looked at over the longer period from 1994 to 2008, there was a clear pattern of substantial increase in the higher grades at all three levels. The rate of First Class awards at Level 8 shows the strongest and most linear pattern of all. Over 90% of the increase in Firsts, from 8.23% in 1994 to 17.01% in 2008, is statistically attributable to the passage of time.

Accompanying the grade increase over the 2005-2008 period there was a marked shift from the award of lower to higher level qualifications. By comparison with the average numbers awarded in 2003 & 2004, the number of Level 8 awards averaged over 2007 & 2008 increased by 10.8%, while Level 7 awards declined by 14%. At Level 6 there was a dramatic decline of 49.7%. Better grades were being awarded in higher level and, therefore, more demanding qualifications.

The question of whether the improved grades might be justified by genuine improvements in learning was examined by reference to potential selection effects improving the average educational quality of students admitted to the IOTs and to evidence on educational achievement at second level and in the IOTs. Nothing was identified which could help to explain why grades across the IOT sector should continuously improve. Grade inflation - declining achievement thresholds for the award of grades - remains the only plausible explanation.

Two additional patterns identifiable in the existing data on grades in the IOT sector were explored in detail. They are variance in higher grade percentages across the four disciplines and similar variance across the individual Institutes.

With respect to discipline variance, at Level 6 the average annual rates of Distinctions in Science/Technology and Engineering over the years 1994 to 2008 were 20.8% and 18%, respectively, as compared with 13.9% in the Humanities and 12.6% in Business. At Level 7, the comparable rates were 19% for both Science/Technology and Engineering, 11% for the Humanities and 13% for Business. At Level 8, the average annual rates of Firsts between 1994 and 2008 were 15.9% and 15.7% in Engineering and Science/Technology, respectively, as compared with 14% in Humanities and 9.5% in Business. In this paper it is hypothesised that differences in the educational ability of students entering courses across the four disciplines might account for the grade differences. An analysis of CAO course-entry points failed to support this hypothesis leading to the conclusion that higher grades are easier to get in Science/Technology and Engineering than in Business and Humanities throughout the IOT sector.

Great variance among Institutes in the rate of higher grades awarded was identified at all three levels. Among Level 8 graduates, in 2003-2004 and 2007-2008, the highest awarding Institute conferred approximately 80% and 68% more combined First Class and 2.1 Honours Degrees than the lowest. The comparable figures for the discrepancies between the top and bottom Institutes at Level 7 were 66.8% and 78.4%. For Level 6 they were 51.4% and 78.4%. This variance was found not to be predicted by variance in the ability of students at entry as indicated by CAO points nor was it found to be a function of variance in the proportion of awards across the four disciplines among the 13 Institutes. At Level 8, smaller Institutes were found to have a disproportionately high percentage of better grades by comparison with their larger counterparts when the much weaker points' profile for entry to the smaller Institutes was taken into account. This strongly supports the 'institutional growth' theory of grade inflation advanced by O'Grady and Quinn (2007).

On-going grade inflation and the absence of comparable standards across Institutes and disciplines in the IOT sector were discussed in terms of unfairness to students, difficulties for employers in using qualifications as an employment selection criterion and in terms of the absence of any measurable output by which the contributions of the IOTs to society may be appraised. Since numbers of graduates together with the qualifications and grades they obtain cannot be trusted as comparable indicators of educational success from time to time, from place to place or from individual to individual, it is now impossible to assess what the Institutes of Technology are collectively or individually achieving. It is also impossible for those entrusted with their management and direction to assess the efficacy or consequences of any investments, disinvestments or adjustments they make.

While, despite the evidence to the contrary, throughput and grades continue to be blindly interpreted as a sound basis for evaluating and funding Institutes of Technology, the schedules of reinforcement at every level within the sector will continue to reward grade inflation. In such circumstances individual Institutes have no motive to maintain standards because to do so would incur much higher failure rates and diminished throughput, for which they would be punished while those who ignore grade inflation are allowed to thrive. Only a determined drive initiated by the Minister for Education and Skills can hope to make headway in addressing this problem.

Part of the solution must involve a fundamental rethink of the hierarchy of qualifications at both second and third level in Ireland. The appearance of success for the current system is predicated entirely on grade inflation, which, if halted, would reveal the true untenable level of failure and underperformance among students. Meanwhile, the minimum educational requirements for access to third level courses need to be recalibrated so as to ensure a reasonable expectation of literacy, numeracy and general educational skill among college entrants.

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1. Introduction

Section Summary

This section describes the context and purpose of the research, the process of acquiring the data and the methodology employed in its analysis.

The report is an analysis of grade inflation in the Institute of Technology sector for the period 2005-2008. It updates the 1994-2004 analysis conducted by O'Grady and Guilfoyle (2007a). All NFQ Level 6 (Higher Certificate), 7 (Ordinary Degree) and 8 (Honours Degree) awards within the IOT sector, excluding those from the Dublin Institute of Technology, are included in the analysis.

The data from most Institutes proved very difficult to obtain and ultimately in most instances was acquired through Freedom of Information requests.

The percentages of top grade awards (First Class or Distinction) and of the combined top two grades (First + 2.1 or Distinction + Merit1) were computed for the 13 IOTs in aggregate, for each IOT separately and for each of the four disciplines of Business, Engineering, Humanities and Science/Technology.

To identify a pattern of change in the rate of higher grades awarded over the period, the average of the 2007 and 2008 rates were compared with that for the two preceding years, 2003 and 2004.

Extensive analysis was undertaken to evaluate whether the increased rate of higher grades found was due to grade inflation or due to improved educational achievement. This included comparison of the scholastic standard of college entrants with their grades on graduation, comparison across the various Institutes and comparison across disciplines

1.1 Purpose of the Study

An earlier research study by the Network for Irish Educational Standards (O'Grady and Guilfoyle, 2007a) described significant trends of grade inflation in all undergraduate awards in the Institute of Technology sector over the years 1994-2004. The present analysis seeks to identify if those trends continued over the period 2005-2008.

1.2 The Data

As with the 2007 analysis (O'Grady and Guilfoyle, 2007a), this study encompasses 13 Institutes of Technology but does not include data from the Dublin Institute of Technology (DIT). The bulk of the data for the previous study was obtained from HETAC, which did not hold such information for the DIT. It was understood that collating the data across the various constituent colleges of the DIT would be a difficult task and, partly for that reason and partly because the DIT, due to its size and separate history, was viewed as different to the other

Institutes of Technology, it was not included. Since the present study was designed, primarily, to update the 2007 study, no effort was made to include the DIT. The absence of any available evidence on grade inflation or grade trends in the DIT is a major lacuna in Irish educational research which calls for a dedicated research project to remedy.

1.3 Non Cooperation by IOTs in Releasing Grade Data

At the outset of this study in April 2008, the Registrars of the 13 individual Institutes were written to requesting in each case the total number of graduates and the numbers awarded each of the top two grades in all NFQ¹ Levels 6, 7 and 8 qualifications, broken into the four discipline areas of Business, Engineering, Humanities and Science/Technology, for each of the years 2005, 2006 and 2007.

Only two Institutes, Waterford and Tralee, supplied the data requested at that point. The others either did not reply, despite reminder letters, or refused to release the information.

HETAC was then contacted to ascertain if it possessed the data for the remaining 11 Institutes and if so, whether it would supply the relevant figures. HETAC had cooperated fully, as had those Institutes with delegated authority, in supplying data for the previous 1994-2004 study. It responded that, though it did have the relevant figures on file, it was precluded under the Data Protection Act from releasing them without the consent of the individual Institutes because it had obtained the figures for a different purpose. HETAC subsequently wrote to all 11 Institutes requesting permission to release the figures. Ten Institutes responded refusing permission to have the data released. HETAC was unable to gain a response from the remaining Institute.

Each of the 11 Institutes was then served with a Freedom of Information request by the Network for Irish Educational Standards for the 2005–2008 figures. By that stage a year had passed and the figures for 2008 had been processed in each Institute. Waterford and Tralee Institutes were contacted separately requesting the 2008 figures. Tralee supplied the data but no response could be obtained from Waterford. Rather than delay the overall study any

¹ The National Framework of Qualifications (NFQ), launched in 2003, was designed and is overseen by the National Qualifications Authority of Ireland. It comprises a unified hierarchical structure encompassing all officially recognized educational qualifications awarded in Ireland. Qualifications are categorized within 10 levels. The Leaving Certificate is categorized at both Levels 4 and 5 because of the Ordinary/Higher Level distinction. The three awards focused on in this study, Higher Certificate (previously National Certificate), Ordinary Degree (previously National Diploma) and Honours Degree, are categorized at NFQ Levels 6, 7 and 8 respectively.

further, it was decided to go ahead without the 2008 figures for Waterford. With two partial exceptions, the 11 Freedom of Information requests were successful, either initially or after the internal appeal stage, and figures were obtained in each case which allowed for the rate of award of the top two grades to be computed. The exceptions were Carlow and Letterkenny. Carlow, on appeal, granted the data for 2006, 2007 and 2008 but maintained that to compile the figures for 2005 would involve considerable labour costs, which the Network for Irish Educational Standards would have to defray. Given the nature of the analysis intended, it was decided not to pursue further the 2005 figures as their absence would have little or no impact on the success of the study. Letterkenny released aggregate figures for each of the four years but did not break down the data by discipline. Again, to avoid further delays it was decided to proceed without the discipline figures for Letterkenny.

The refusal by so many IOTs to release data on grades until compelled to do so by the Freedom of Information legislation reflects negatively on their willingness to engage with openness and transparency on the matter of educational standards.

1.4 Methodology

The original database, comprising the 1994-2004 data, was updated to include the figures for 2005-2008. This updated database is available at the Network for Irish Educational Standards www.stopgradeinflation.ie. For each of the 13 Institutes, within each of the four disciplines of Business, Engineering, Humanities and Science-Technology, the raw totals for each grade awarded at NFQ Levels 6 (Higher Certificate), 7 (Ordinary Degree) and 8 (Honours Degree) were entered. From those totals, grade percentages in each of the four years, for each NFQ Level in each Institute, each discipline and, in the aggregate of all 13 Institutes, were computed. The figures are described in detail in this report.

To identify a trend of grade increase at each NFQ Level, the percentage of the top grade (Distinction or First Class) and the percentage of the combined top two grades (First /2.1 or Distinction/Merit 1) were averaged for the final two years of the 2005-08 period, i.e., 2007 and 2008, and compared with the average percentages for the final two years of the period examined in the previous study, i.e., 2003-2004.

For each NFQ Level, the rates of grade increase/decrease were calculated for each institute, each discipline and for the total of awards across all 13 Institutes. The rates in all cases were expressed as the percentage change in the 2007-08 figures over the 2003-04 baselines.

Using the average of two years at the beginning and end of the period reduces the impact of random, year-to-year fluctuations in the percentages of higher grades awarded. In this way, a more accurate sense of the temporal trend can be identified than if individual years were used to represent the start and end points of the period. In the previous study, involving a much longer time period, the averages of three years at the beginning and end were used for the same comparison. Because the period under scrutiny in this study is only four years, it was decided that a comparison of two year averages might more accurately represent the temporal trend.

Further analysis was conducted to ascertain if grade increases identified might be due to factors other than grade inflation. This focused on the minimum CAO points for courses on which the graduates under analysis had entered the Institutes and involved the comparison of entrance point profiles with grades at graduation across the 13 Institutes. An analysis was also conducted involving the three factors of Institute size (student intake), points' profile and grades' profile in an effort to identify if Institute size had an impact on academic standards.

Other relevant factors, such as the proportion of adult admissions, rate of throughput to NFQ Level 8 courses and educational standards at second level, were also examined in an effort to explain the grade trends identified.

2. Results

Section Summary

This section details the comparison between the rate of the top two grades in 2007& 2008 combined and 2003 & 2004 combined at NFQ levels 6, 7 and 8, in aggregate, by discipline and within each individual Institute. The longer term (1994-2008) grade increase trends are also described.

Between the two periods the percentage of the combined top two grades increased by 13.5%, 6.7% and 16.9% at Level 6, 7 and 8 respectively. The top grade increased at Level 6 by 7.1%, at Level 8 by 15.7% but decreased at Level 7 by 11.1%. The rates of change in the higher grades fluctuated widely between Institutes varying from large increases of over 50% to large decreases of a similar order. Calculated by discipline for the top two grades combined at Level 6, Science/Technology (+40.4%) and Business (+15.7%) accounted for all the grade increase. The percentage of the top two grades combined fell in Engineering (-3.5%) and in Humanities (-7.6%). In contrast at Level 7, Engineering (+16%) and Humanities (+27.7%) accounted for the bulk of grade increase with Business (+0.5%) and Science/Technology (+2.2%) showing only negligible increases in the higher grades. At Level 8, Business (+15.8%), Engineering (+24.8%) and Science/Technology (+25.9%) all showed substantial increases in the combined top two grades but there was only a relatively minor increase in Humanities (+4.1%).

Looked at over the longer period from 1994 to 2008, there was a clear pattern of substantial increase in the higher grades at all three levels. The rate of First Class awards at Level 8 shows the strongest and most linear pattern of all. Over 90% of the increase in Firsts, from 8.23% in 1994 to 17.01% in 2008, is statistically attributable to the passage of time.

Accompanying the grade increase over the 2005-2008 period there was a marked shift from the award of lower to higher level qualifications. By comparison with the average numbers awarded in 2003-2004, the number of Level 8 awards averaged over 2007-2008 increased by 10.8%, while Level 7 awards declined by 14%. At Level 6 there was a dramatic decline of 49.7%. Better grades were being awarded in higher level and, therefore, more demanding qualifications.

2.1 Results: NFQ Level 6 (Higher Certificate)

2.1.1 Level 6 (Higher Certificate): Aggregate Figures

As evident in Table 1 below, there was nearly a 50% decline between 2003-2004 and 2007-2008 in the total number of Higher Certificates awarded across the IOTs. There was a smaller decline (-14%) in the award of Ordinary Degrees (see Table 5 below) but a 10.8% increase in the award of Honours Degree qualifications over the period (see Table 9 below). The changes reflect an increasing emphasis on the provision of higher NFQ level qualifications in the IOT sector, coupled with an overall decline in student numbers.

TABLE 1: TOTAL LEVEL 6 (HIGHER CERTIFICATE) - AVERAGE GRADE RATES FOR 2003 & 2004 COMPARED WITH AVERAGE RATES FOR 2007 & 2008

| Year | Total Number of Graduates | % Distinction | % Merit 1 | % Distinction + Merit 1 |
|------------------------|---------------------------|---------------|-----------|-------------------------|
| 2003 | 6351 | 19.5 | 19.1 | 38.6 |
| 2004 | 5989 | 17.7 | 17.0 | 34.7 |
| Average 2003-04 | 6170 | 18.6 | 18.1 | 36.7 |
| 2007 | 3930 | 17.3 | 22.3 | 39.5 |
| 2008 | 2272 | 22.6 | 21.1 | 43.7 |
| Average 2007-08 | 3101 | 19.9 | 21.7 | 41.6 |
| % Change | -49.7 | 7.1 | 20.1 | 13.5 |

At the aggregate level, previous trends of grade increase at Level 6 continued, with combined Distinction and Merit 1 awards up 13.5%, Distinctions up 7.1% and Merit 1 awards up 20.1%. The breakdown across disciplines is detailed in Table 2 below.

2.1.2 Level 6 (Higher Certificate): Discipline Variance

The overall increase in the award of higher grades across Higher Certificates was accounted for by the trends in two of the four disciplines, Business and Science/Technology, especially the latter, in which the combined upper grades increased by 40.4%. The increase was 15.7% in Business. Both Engineering and Humanities showed a decline in the award of upper grades of 3.5% and 7.6% respectively.

TABLE 2: LEVEL 6 (HIGHER CERTIFICATE) BY DISCIPLINE - COMPARISON OF AVERAGE COMBINED DISTINCTION/MERIT 1 RATES FOR 2003 & 2004 WITH THOSE FOR 2007 & 2008

| Year | % in Business | % in Engineering | % in Humanities | % in Science and Technology |
|-----------------|---------------|------------------|-----------------|-----------------------------|
| 2003 | 35.6 | 39.8 | 41.5 | 41.0 |
| 2004 | 28.2 | 36.2 | 52.0 | 36.5 |
| Average | 31.9 | 38.0 | 46.7 | 38.7 |
| 2007 | 34.5 | 38.3 | 39.4 | 50.8 |
| 2008 | 39.2 | 35.0 | 47.0 | 58.0 |
| Average | 36.9 | 36.7 | 43.2 | 54.4 |
| % Change | 15.7 | -3.5 | -7.6 | 40.4 |

In Engineering, the drop occurred only in Distinctions (-21.7%) with Merits 1 up by 19.7%. In Humanities, the trend was similar with Distinctions

showing a decline of 46.3% and Merits 1 an increase of 34.5%. The larger number of Merit 1 awards mean that the proportionately larger decline at Distinction level is reversed when Distinctions and Merit 1 percentages are aggregated in Table 2 above.

Grade increase in both Business and Science/Technology occurred at both the Distinction and Merit 1 grades. In Business, Distinctions were up by 26.1% and Merit 1 awards up 8.4%. In Science/Technology, the increases in Distinctions and Merit 1 rates were 42.6% and 37.5%, respectively.

2.1.3 Level 6 (Higher Certificate): Institutional Variance

The decrease in the total number of Higher Certificates awarded is evident across all of the Institutes. In Dun Laoghaire, so few Higher Certificates were awarded in 2007 & 2008 that no real implications can be drawn from the figures listed in Tables 3 and 4 below. Letterkenny did not report the award of any Higher Certificates. Of the remaining eleven Institutes, six showed an increase in the award of Distinctions over the period 2003-2004 to 2007-2008, ranging in scale from 51.7% at Carlow to 11% at Cork. The five remaining Institutes, Waterford, Limerick, Tralee, Blanchardstown and Dundalk, showed a decline in the rate of Distinctions ranging from 32.6% at Waterford to 4.6% at Dundalk.

TABLE 3: LEVEL 6 (HIGHER CERTIFICATE) - DISTINCTION RATES BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

| Institute | Higher Certificate: Number of Graduates (Avg. 2003-04) | % Distinction (2003-04) | Higher Certificate: Number of Graduates (Avg. 2007-08) | %Distinction (2007-08) | % Change |
|----------------|--|-------------------------|---|------------------------|----------|
| Carlow | 469 | 21.0 | 363 | 31.9 | 51.7 |
| GMIT | 755 | 16.0 | 332 | 21.0 | 31.3 |
| Athlone | 584 | 12.8 | 367 | 15.7 | 23.1 |
| Tallaght | 513 | 16.1 | 320 | 19.2 | 19.6 |
| Sligo | 438 | 18.0 | 275 | 21.0 | 16.7 |
| Cork | 1102 | 21.0 | 537 | 23.3 | 11.0 |
| Dundalk | 399 | 16.2 | 128 | 15.5 | -4.6 |
| Blanchardstown | 113 | 21.2 | 80 | 19.9 | -6.4 |
| Tralee | 363 | 21.0 | 218 | 19.3 | -8.3 |
| Limerick | 466 | 17.3 | 296 | 15.1 | -12.8 |
| Waterford | 634 | 23.3 | 173 | 15.7 | -32.6 |
| Dun Laoghaire | 56 | 21.6 | 16 | 9.4 | -56.4 |
| Letterkenny | 282 | 20.8 | None Reported | 21.0 | |

Aside from Dun Laoghaire and Letterkenny, the trend in the other Institutes for the award of the combined top two grades (see Table 4 below) was either static (Waterford and Tallaght) or increasing, except for in Blanchardstown which registered an 11.6% decrease. Athlone and Carlow showed the most substantial increases at 59.2% and 46.5% respectively.

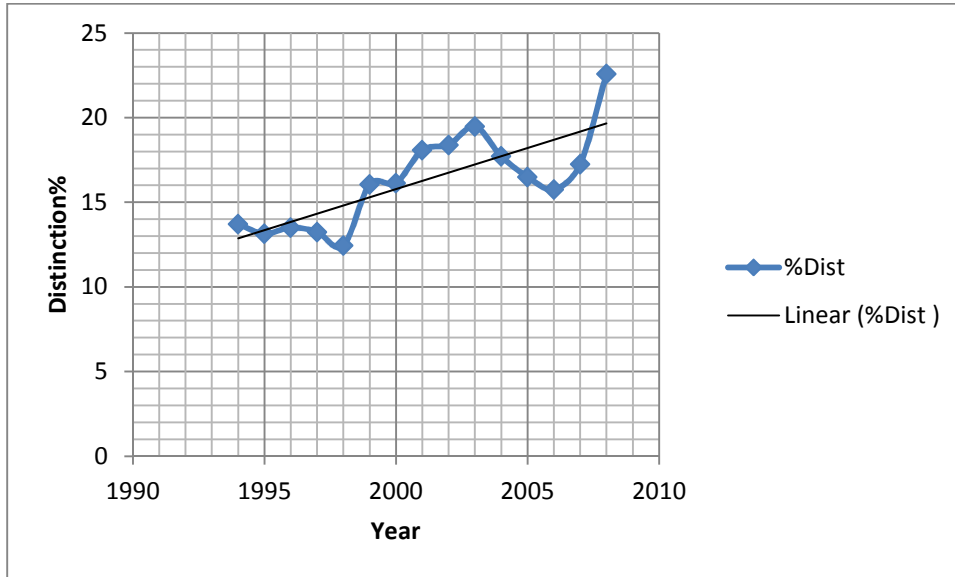
TABLE 4: LEVEL 6 (HIGHER CERTIFICATE) - COMBINED DISTINCTION/MERIT 1 RATES BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

| Institute | Higher Certificate: Number of Graduates (Avg. 2003-04) | % Distinction + Merit 1 (2003-04) | Higher Certificate: Number of Graduates (Avg. 2007-08) | % Distinction + Merit 1 (2007-08) | % Change |
|----------------|--|-----------------------------------|---|-----------------------------------|----------|
| Athlone | 584 | 28.4 | 367 | 45.3 | 59.2 |
| Carlow | 469 | 35.5 | 363 | 52.0 | 46.5 |
| Dundalk | 399 | 33.6 | 128 | 39.8 | 18.3 |
| GMIT | 755 | 35.3 | 332 | 40.9 | 15.9 |
| Cork | 1102 | 43.2 | 537 | 47.8 | 10.8 |
| Tralee | 363 | 38.1 | 218 | 41.7 | 9.4 |
| Limerick | 466 | 34.7 | 296 | 37.6 | 8.2 |
| Sligo | 438 | 37.3 | 275 | 39.8 | 6.7 |
| Waterford | 634 | 41.2 | 173 | 41.4 | 0.5 |
| Tallaght | 513 | 30.8 | 320 | 30.6 | -0.8 |
| Blanchardstown | 113 | 35.1 | 80 | 31.0 | -11.6 |
| Dun Laoghaire | 56 | 53.7 | 16 | 12.1 | -77.7 |
| Letterkenny | 282 | 36.7 | None Reported | --- | --- |

2.1.4 Level 6 (Higher Certificate): Longer Term Grade Increase Trend (1994-2008)

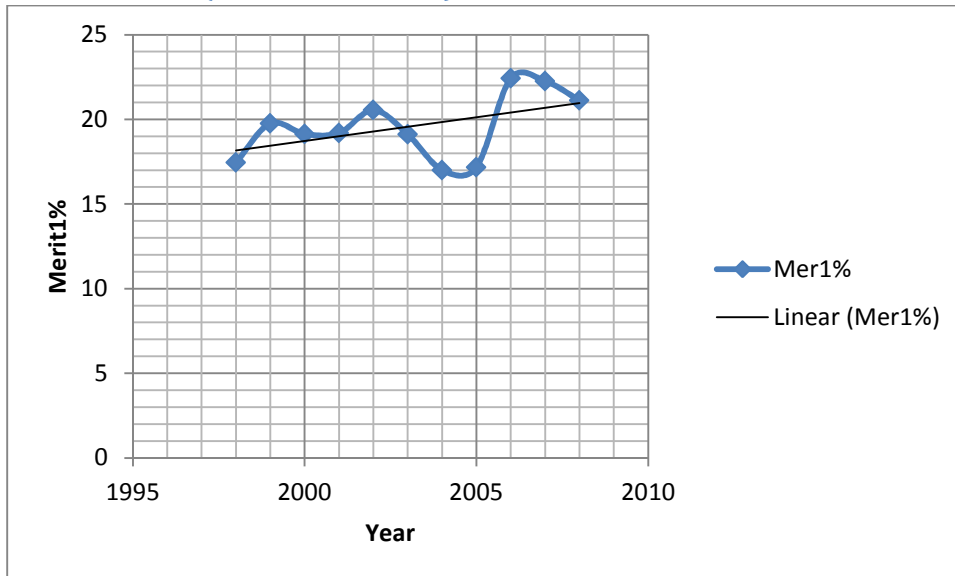
As illustrated in Figure 1 below, there has been a significant long term trend of grade increase in Distinctions at Higher Certificate level. In 1994, 13.72% of Level 6 graduates obtained a Distinction. In 2008 the rate stood at 22.58%, the highest recorded in the 15 year period. While the rate declined somewhat between 2003 and 2006, it recovered again in 2007 and made the largest annual leap of all between 2007 and 2008. An R Squared figure of 0.605 describes the slope of the line of best fit in Figure 1. This indicates that an estimated 60% of the variance in the rate of Distinctions from year to year is statistically associated with the passage of time.

FIGURE 1: LEVEL 6 (HIGHER CERTIFICATE) - DISTINCTION % 1994-2008



The second highest grade, Merit 1, was first introduced in 1998. In that year the overall national rate of Merit 1 awards throughout the IOT sector was 17.45%. In 2008, the rate was 21.13% narrowly behind the rates of 22.43% and 22.25% recorded for 2006 and 2007. While the upward trend overall in Merit 1 awards may be visually no clearer than that for Distinctions (see Figure 2 below), the statistical trend is slightly stronger, as indicated by an R Squared figure of 0.655, with in excess of 65% of the changes from year to year in the Merit 1 rate being attributable to the passage of time.

FIGURE 2: LEVEL 6 (HIGHER CERTIFICATE) - MERIT 1 % 1998-2008



2.2 Results: NFQ Level 7 (Ordinary Degree)

2.2.1 Level 7 (Ordinary Degree): Aggregate Figures

Across all Ordinary Degrees awarded by the IOTs, the rate of higher grades went up by 6.7% between 2003-04 and 2007-08, a trend derived entirely from an increase in the rate of Merit 1 awards of 21%. The award of Distinctions in Ordinary Degrees declined over the period by 11.1%.

TABLE 5: TOTAL LEVEL 7 (ORDINARY DEGREE) – AVERAGE GRADE RATES FOR 2003 & 2004 COMPARED WITH AVERAGE RATES FOR 2007 & 2008

| Year | Number of Graduates | % Distinction | % Merit 1 | % Distinction + Merit 1 |
|-----------------|---------------------|---------------|-----------|-------------------------|
| 2003 | 7086 | 19.8 | 26.2 | 46.0 |
| 2004 | 7657 | 18.7 | 21.3 | 40.0 |
| Average | 7372 | 19.3 | 23.8 | 43.0 |
| 2007 | 6724 | 16.8 | 28.6 | 45.4 |
| 2008 | 5956 | 17.5 | 28.9 | 46.4 |
| Average | 6340 | 17.1 | 28.8 | 45.9 |
| % Change | -14.0 | -11.1 | 21.0 | 6.7 |

There was a 14% reduction between 2003-04 and 2007-08 in the overall number of Ordinary Degrees awarded. This, by comparison with the 49.7% decline in the number of Higher Certificates awarded over the same period, indicates a proportional shift from NFQ Level 6 to Level 7 qualifications in the IOT sector.

2.2.2 Level 7 (Ordinary Degree): Discipline Variance

The increase in higher grades across Ordinary Degrees was mainly accounted for by those in Humanities and Engineering which showed an increase in combined Distinction/Merit 1 awards of 27.7% and 16% respectively (see Table 6 below). The comparable rates of increase in Science/Technology and Business were small or negligible at 2.2% and 0.5% respectively. The grade increase in Engineering was accounted for mainly by a 32% increase in Merit 1 awards with Distinctions only going up by 1.6%. In Humanities the increase was entirely down to a 39.2% jump in Merit 1 grades with Distinctions declining by 1.8%.

In Business there was a 7.6% drop in Distinctions but this was offset by a 5.6% increase in the more numerous Merit 1 grade. A somewhat similar pattern

was evident in Science/Technology where Distinctions showed a 16.7% decline and Merit 1 grades increased by 25.7%.

TABLE 6: LEVEL 7 (ORDINARY DEGREE) BY DISCIPLINE – COMPARISON OF AVERAGE COMBINED DISTINCTION/MERIT 1 RATES FOR 2003 & 2004 WITH THOSE FOR 2007 & 2008

| Year | % Distinction + Merit 1 in Business | %Distinction + Merit 1 in Engineering | % Distinction + Merit 1 in Humanities | % Distinction + Merit 1 in Science and Technology |
|--------------------------|-------------------------------------|---------------------------------------|---------------------------------------|---|
| 2003 | 44.9 | 43.7 | 43.5 | 51.2 |
| 2004 | 37.5 | 39.6 | 37.2 | 45.7 |
| Average (2003-04) | 41.2 | 41.7 | 40.4 | 48.4 |
| 2007 | 41.3 | 47.1 | 49.9 | 48.9 |
| 2008 | 41.5 | 49.6 | 53.2 | 50.1 |
| Average (2007-08) | 41.4 | 48.3 | 51.5 | 49.5 |
| % Change | 0.5 | 16.0 | 27.7 | 2.2 |

2.2.3 Level 7(Ordinary Degree): Institutional Variance

The direction and extent of change in the award of Distinctions varied widely across the 13 Institutes. Nine institutes showed a decline ranging from a 50.1% in Dundalk to 6.2% at Cork. Three Institutes, Tallaght, Athlone and Limerick, registered an increase in the percentage of Distinctions ranging between 30% and 40%. The remaining Institute, Sligo, showed an increase of 11%.

TABLE 7: LEVEL 7 (ORDINARY DEGREE) - DISTINCTION RATES BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

| Institute | Number of Graduates (Avg. 2003-04) | % Distinction (2003-04) | Number of Graduates (Avg. 2007-08) | % Distinction (2007-08) | % Change |
|----------------|------------------------------------|-------------------------|-------------------------------------|-------------------------|----------|
| Tallaght | 414 | 12.9 | 433 | 17.9 | 39.1 |
| Athlone | 708 | 12.3 | 520 | 16.7 | 35.8 |
| Limerick | 562 | 11.5 | 465 | 15.0 | 30.6 |
| Sligo | 742 | 18.7 | 825 | 20.8 | 11.0 |
| Cork | 1126 | 23.3 | 1166 | 21.8 | -6.2 |
| Carlow | 383 | 19.5 | 305 | 17.0 | -12.8 |
| GMIT | 912 | 19.8 | 836 | 15.6 | -21.0 |
| Blanchardstown | 168 | 26.6 | 299 | 20.0 | -24.7 |
| Dun Laoghaire | 195 | 19.8 | 67 | 12.8 | -35.6 |
| Tralee | 429 | 24.2 | 321 | 15.2 | -37.1 |
| Waterford | 906 | 19.0 | 583 | 10.1 | -46.7 |
| Letterkenny | 339 | 23.3 | 387 | 12.4 | -47.0 |
| Dundalk | 491 | 23.5 | 427 | 11.7 | -50.1 |

In terms of their trends in the award of the combined higher grades, Distinctions and Merit 1 (see Table 8 below), the 13 Institutes fall into three categories, those that show more substantial grade increase, those that show relatively minor changes in either direction and those that show relatively substantial grade decrease. Three Institutes stand out for their extent of grade increase in Ordinary Degrees: Athlone, Limerick and Sligo, with increases in the combined top two grades of 47.8%, 45.7% and 24.1% respectively. In all three cases, the increases occurred in both Distinction and Merit 1 grades.

TABLE 8: LEVEL 7 (ORDINARY DEGREE) - COMBINED DISTINCTION/MERIT 1 RATES BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

| Institute | Number of Graduates (Avg. 2003-04) | % Distinction + Merit 1 (2003-04) | Number of Graduates (Avg. 2007-08) | % Distinction + Merit 1 (2007-08) | % Change |
|----------------|------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|----------|
| Athlone | 708 | 31.6 | 520 | 46.7 | 47.8 |
| Limerick | 562 | 32.4 | 465 | 47.2 | 45.7 |
| Sligo | 742 | 42.2 | 825 | 52.3 | 24.1 |
| Cork | 1126 | 51.8 | 1166 | 54.6 | 5.4 |
| Dundalk | 491 | 44.4 | 427 | 46.8 | 5.2 |
| Tralee | 429 | 42.2 | 321 | 43.8 | 3.7 |
| Waterford | 906 | 43.5 | 583 | 45.1 | 3.6 |
| Carlow | 383 | 40.4 | 305 | 41.8 | 3.3 |
| GMIT | 912 | 48.8 | 836 | 47.0 | -3.6 |
| Tallaght | 414 | 35.4 | 433 | 32.0 | -9.8 |
| Letterkenny | 339 | 43.1 | 387 | 32.1 | -25.4 |
| Blanchardstown | 168 | 52.7 | 299 | 35.3 | -33.3 |
| Dun Laoghaire | 195 | 49.6 | 67 | 27.1 | -45.5 |

A group comprised of Cork, Dundalk, Tralee, Waterford, Carlow and GMIT evidence minor changes of between +5.4% and -3.6%. In five of the six cases, there was a sufficient increase in the rate of Merit 1, to turn the pattern of decline evident at the Distinction level into a grade increase when the top two grades were combined. For Dundalk, Tralee and Waterford, that reversal was of a very significant order. In GMIT, a decline of 21% in Distinctions was transformed into a more marginal decline of 3.6% when Distinction and Merit 1 grades were combined.

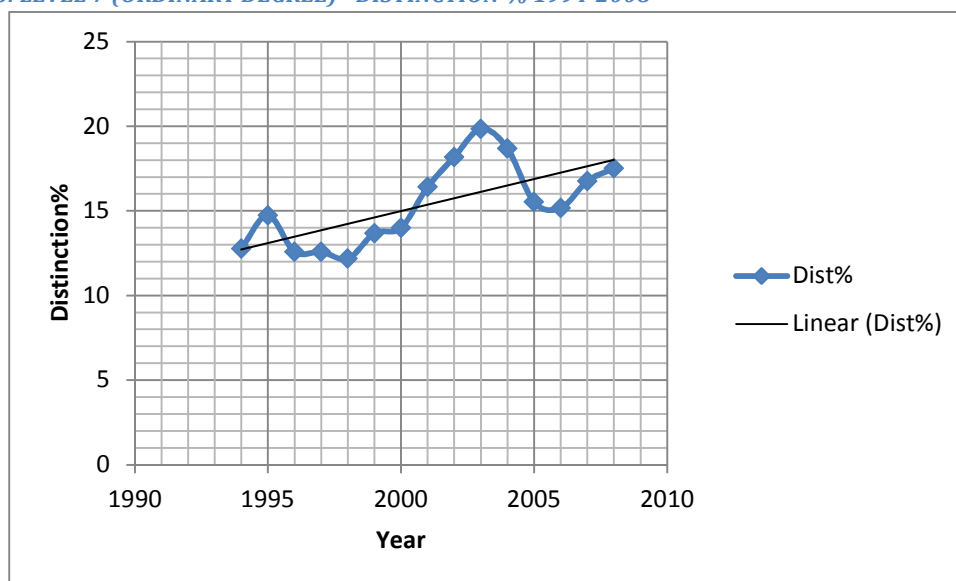
The final group of four IOTs, made up of Tallaght, Letterkenny, Blanchardstown and Dun Laoghaire, show substantial declines in the proportion of higher grades awarded. Their figures respectively are -9.8%, -25.4%, -33.3% and -45.5%. The Dun Laoghaire figures for 2007-08 are based on a relatively small average across the two years of only 67 Ordinary Degree awards. Too much emphasis should not be placed on those figures because small numbers of graduates are amenable to significant random fluctuations in genuine performance from year to year due to variations in student ability and application. Letterkenny, Blanchardstown and DunLaoghaire showed significant

declines in both Distinction and Merit 1 grades but Tallaght, which had the highest rate of increase in Distinctions, had such a large fall in Merit 1 grades as to turn the trend at the combined top two grades into a decline.

2.2.4 Level 7 (Ordinary Degree): Longer Term Grade Increase Trend (1994-2008)

As with the higher grades at Level 6, the longer term trajectories of Distinctions and Merit 1 rates at Level 7 have also been upwards. In 1994, the rate of

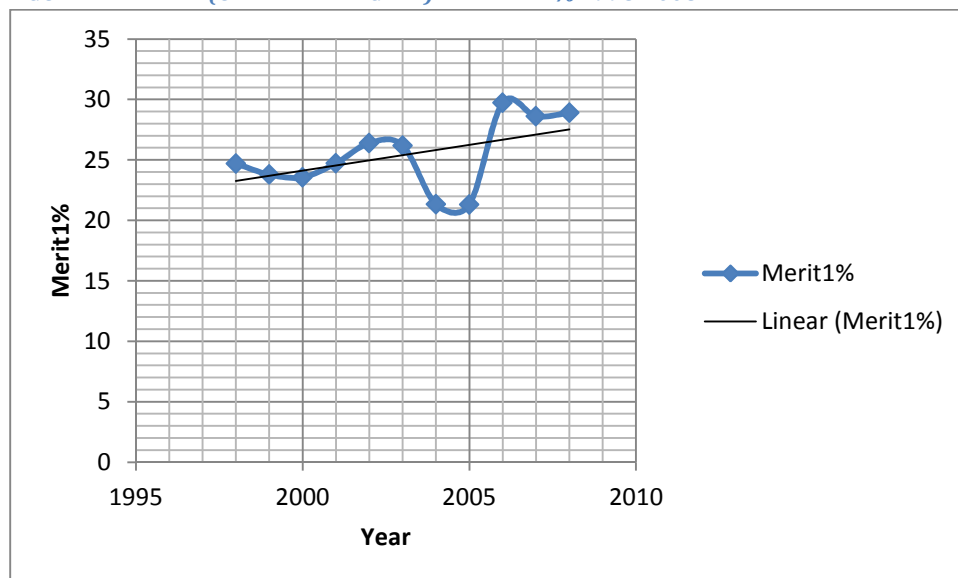
FIGURE 3: LEVEL 7 (ORDINARY DEGREE) - DISTINCTION % 1994-2008



Distinction awards at Level 7 stood at 12.77%. In 2008 it stood at 17.51%. Between 2000 and 2003, the rates had increased quite sharply up to nearly 20% but then dropped back, also quite sharply, to resume the previous more gradual climb from 2006. The R Squared figure describing the fit line shown in Figure 3 above is .476 indicating that over 47% of the change from year to year in the rate of Distinctions was associated with the passage of time.

The Merit1 grade, introduced in 1998, showed a rate of 24.71% in that year. Since then, the overall slope, as illustrated in Figure 4, has been upwards with the rates for 2006, 2007 and 2008 surpassing all previous figures. There was a notable dip for 2004 and 2005 but the general upward trajectory was resumed thereafter with the Merit 1 grade in 2008 accounting for 28.9% of all Ordinary Degree graduates. The R Squared estimate of the line of best fit shown in Figure 4 is .663 which means that over two thirds of the annual variance in the grade percentage between 1998 and 2008 is statistically attributable to the passage of time.

FIGURE 4: LEVEL 7 (ORDINARY DEGREE) - MERIT 1 % 1998-2008



2.3 Results: NFQ Level 8 (Honours Degree)

2.3.1 Level 8 (Honours Degree): Aggregate Figures

Nationally, there was substantial grade increase in both First Class and 2.1 awards. The two higher grades combined increased by 16.9% between 2003-04 and 2007-08. This was due to a 15.7% increase in First Class Honours and a 17.5% increase in 2.1 awards.

TABLE 9: TOTAL LEVEL 8 (HONOURS DEGREES) - AVERAGE GRADE RATES FOR 2003 & 2004 COMPARED WITH AVERAGE RATES FOR 2007 & 2008

| Year | Number of Graduates | % 1 st Class | % 2.1 | % 1 st +2.1 |
|--------------------------|---------------------|-------------------------|-------|------------------------|
| 2003 | 4989 | 13.5* | 31.7 | 45.2 |
| 2004 | 5858 | 14.6 | 29.5 | 44.1 |
| Average (2003-04) | 5424 | 14.1 | 30.6 | 44.7 |
| 2007 | 6549 | 15.6 | 36.3 | 51.9 |
| 2008 | 5473 | 17.0 | 35.6 | 52.6 |
| Average (2007-08) | 6011 | 16.3 | 36.0 | 52.3 |
| % Change | 10.8 | 15.7 | 17.5 | 16.9 |

* See footnote to Table 11 re. error in database for 2003 rate of Firsts quoted in O'Grady and Guilfoyle, (2007a).

An increase of 10.8% in the number of Honours Degrees awarded over the period was, therefore, accompanied by a substantial increase in the proportion of higher grades.

2.3.2 Level 8: Discipline Variance

At 25.9%, 24.8% and 15.8% respectively the increases in combined Firsts and 2.1s were substantial in Science/Technology, Engineering and Business. In Humanities there was a minor increase of 4.1%.

TABLE 10: LEVEL 8 (HONOURS DEGREE) BY DISCIPLINE – COMPARISON OF AVERAGE COMBINED 1ST /2.1 RATES FOR 2003 AND 2004 WITH THOSE FOR 2007 & 2008

| Year | % 1 st + 2.1 in Business | % 1 st + 2.1 in Engineering | % 1 st + 2.1 in Humanities | % 1 st + 2.1 in Science/Technology |
|--------------------------|-------------------------------------|--|---------------------------------------|---|
| 2003 | 42.4 | 44.9 | 58.7 | 41.5 |
| 2004 | 41.2 | 44.1 | 57.6 | 40.8 |
| Average (2003-04) | 41.8 | 44.5 | 58.1 | 41.2 |
| 2007 | 50.7 | 53.9 | 57.1 | 50.7 |
| 2008 | 46.1 | 57.2 | 64.0 | 53.0 |
| Average (2007-08) | 48.4 | 55.5 | 60.5 | 51.8 |
| % Change | 15.8 | 24.8 | 4.1 | 25.9 |

In Science/Technology, Engineering and Business, the grade increases were substantial for both the First and 2.1 grades separately. Science/Technology recorded a rise of 24.2% in First Class awards and 27.1% in the 2.1 grade. The corresponding increases for Business were 21% (Firsts), 14.1% (2.1) and for Engineering: 12.2% (Firsts) and 32.2% (2.1). Humanities showed a decline of 12.3% in Firsts but an increase of 10.9% in the more numerous 2.1 grade, which resulted in the 4.1% increase in the combined higher grades indicated above.

2.3.3 Level 8 (Honours Degree): Institutional Variance

As evident in Table 11 below, the direction and scale of grade change in Firsts at Level 8 differ greatly across the 13 Institutes, from a 57.4% increase at Tralee to a 48% decline at Tallaght.

Nine institutes in all evidenced an increase in the rate of Firsts, seven in excess of 25% and two exceeding 50%. The four others showed various amounts of decline in the award of Firsts, three of quite substantial orders. It is striking that three of the four are all located in Dublin and the fourth not far away from Dublin in Dundalk. Why this pattern should exist is not at all apparent.

TABLE 11: LEVEL 8 (HONOURS DEGREE) - RATES OF FIRSTS BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

| Institute | Number of Graduates (Avg. 2003-04) | % 1 st (2003-04) | Number of Graduates (Avg. 2007-08) | % 1 st (2007-08) | % Change |
|-----------------------|------------------------------------|-----------------------------|------------------------------------|-----------------------------|----------|
| Tralee | 246 | 11.85 | 375 | 18.65 | 57.4 |
| Limerick | 604 | 9.75 | 614 | 15.15 | 55.4 |
| Letterkenny | 210 | 11.55 | 306 | 16.9 | 46.3 |
| Cork | 667 | 14.85 | 812 | 20.35 | 37.0 |
| Sligo | 524 | 13.35 | 584 | 17.9 | 34.1 |
| Waterford* | 983 | 12.6 | 1175 | 16.4 | 30.2 |
| Carlow | 227 | 15.65 | 339 | 20.05 | 28.1 |
| Athlone | 439 | 9.15 | 537 | 10.7 | 16.9 |
| GMIT | 587 | 16.85 | 758 | 18.3 | 8.6 |
| Dun Laoghaire | 148 | 20.8 | 145 | 18.8 | -9.6 |
| Dundalk | 301 | 10.85 | 463 | 8.15 | -24.9 |
| Blanchardstown | 102 | 29.8 | 125 | 16.05 | -46.1 |
| Tallaght | 341 | 23.35 | 368 | 12.15 | -48.0 |

*In O’Grady and Guilfoyle (2007a) the rate of Firsts for Waterford for 2002-2004 was quoted in error as 18.39% in Table 8. The rate should have been 11.25%. The error resulted from a transcription mistake which caused the number of 2.2 awards for 2003 to be entered as Firsts and vice versa in the database. The database was corrected for this report and extensive checks made to identify if any similar errors had been made. None were identified. Apart from causing Waterford IOT to be misrepresented in O’Grady and Guilfoyle (2007a) as having a rate of increase in Firsts between 1994-1996 and 2002-2004 of 64.2% when the actual increase was only a negligible 0.45%, the error resulted in an overestimate of the national rate of increase in Firsts over the period. The national rate of Firsts for 2002-2004 quoted in Table 8 of O’Grady and Guilfoyle (2007a) was 15.07% with an increase of 51.9% over the 1994-1996 average. The corrected rate for 2002-2004 is 13.82%, an increase of 39.3% over the 2002-2004 figure. The updated SPSS database, including the 2005-2008 figures available on the Network for Irish Educational Standards website now includes the corrected 2003 figures for Waterford.

When Firsts and 2.1s are combined (Table 12 below), ten of the thirteen Institutes showed an increase between 2003-04 and 2007-08 ranging from 51% at Limerick to 7 % at GMIT. Three Institutes, Dun Laoghaire, Blanchardstown and Tallaght, evidenced the opposite trend with a decline in the top two grades of 18%, 34% and 37% respectively. The rate of increase in 2.1s at Dundalk was sufficient to heavily outweigh the decline in Firsts bringing it to second place in the rank order of grade increase for the combined higher grades.

TABLE 12: LEVEL 8 (HONOURS DEGREE) - COMBINED FIRST /2.1 RATES BY INSTITUTE IN ORDER OF PERCENTAGE CHANGE BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED

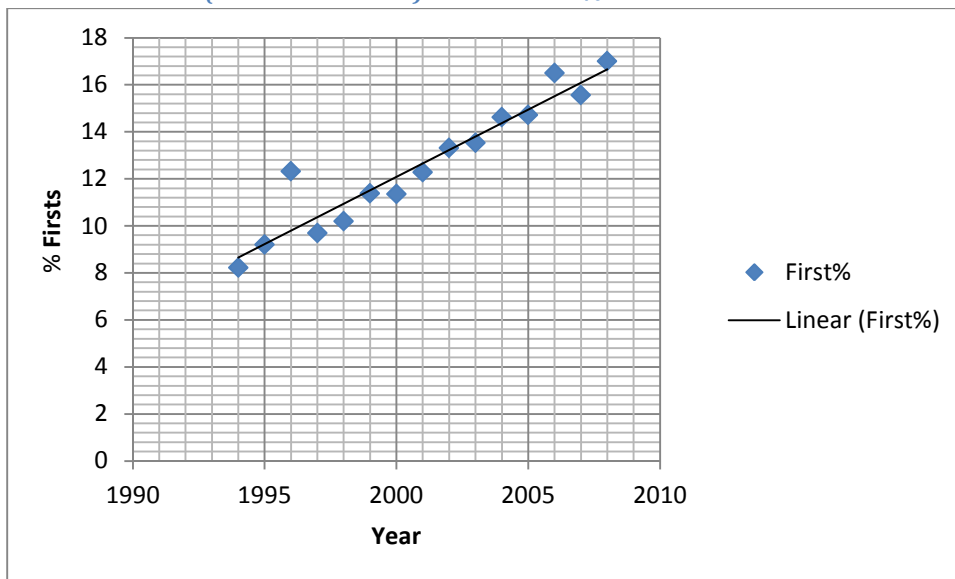
| Institute | Number of Graduates (Avg. 2003-04) | % 1 st +2.1 (2003-04) | Number of Graduates (Avg. 2007-08) | %1 st + 2.1 (2007-08) | % Change |
|------------------|------------------------------------|----------------------------------|-------------------------------------|----------------------------------|----------|
| Limerick | 604 | 38.9 | 614 | 58.7 | 50.9 |
| Dundalk | 301 | 32.8 | 463 | 47.2 | 43.9 |
| Athlone | 439 | 33.3 | 537 | 47.0 | 41.2 |
| Waterford | 983 | 42.3 | 1175 | 57.5 | 36.0 |
| Cork | 667 | 59.1 | 812 | 59.1 | 26.2 |
| Tralee | 246 | 34.1 | 375 | 41.2 | 20.8 |
| Carlow | 227 | 46.2 | 339 | 55.0 | 19.0 |
| Sligo | 524 | 47.4 | 584 | 54.7 | 15.4 |

| | | | | | |
|----------------|-----|------|-----|------|-------|
| Letterkenny | 210 | 37.0 | 306 | 42.3 | 14.4 |
| GMIT | 587 | 55.8 | 758 | 59.9 | 7.2 |
| Dun Laoghaire | 148 | 58.7 | 145 | 47.9 | -18.4 |
| Blanchardstown | 102 | 55.1 | 125 | 37.1 | -33.7 |
| Tallaght | 341 | 56.7 | 368 | 35.6 | -37.2 |

2.3.4 Level 8 (Honours Degree): Longer Term Grade Increase Trend (1994-2008)

Of all the higher grades in qualifications awarded in the IOT sector, the rate of Firsts in Honours Degrees shows the strongest and most linear pattern of increase over time, as illustrated by the slope of the fit line in Figure 5 below and the narrow dispersion of the data points around it. The R Squared figure for the line is .905 indicating that over 90% of the variance from year to year in the rate of Firsts between 1994 and 2008 is statistically attributable to the passage of time. In 1994, the percentage of Firsts was 8.23%. This increased year by year in an almost linear fashion to reach 17.01% in 2008, a proportionate increase of over 100%.

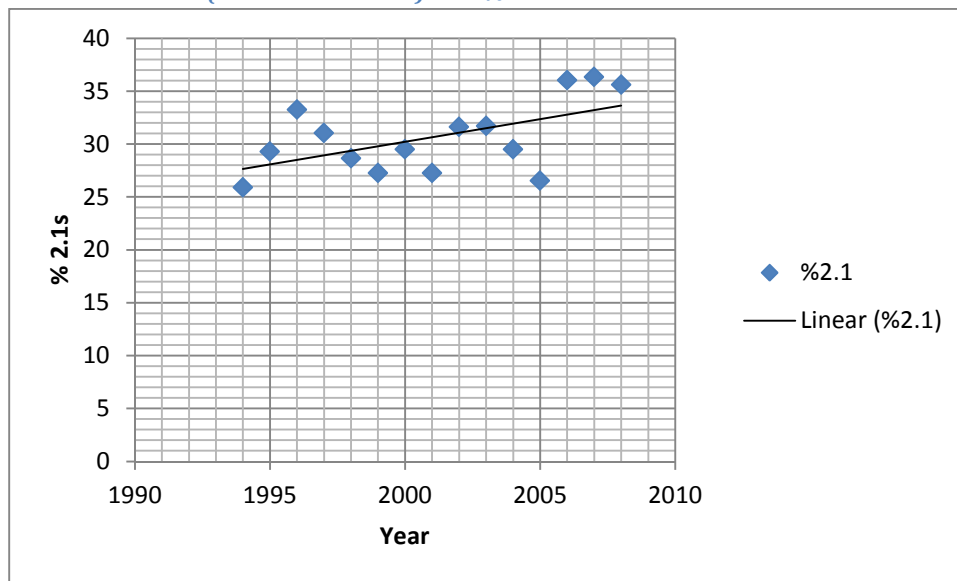
FIGURE 5: LEVEL 8 (HONOURS DEGREE) - FIRST CLASS % 1994-2008



As evident in the slope of the fit line in Figure 6 below, the rate of increase in 2.1 awards was much slower than in the case of Firsts. In 1994, 25.89% of Honours Degree graduates obtained a 2.1 grade. This figure stood at 35.61% in 2008 with a proportionate increase in the meantime of 37.5%, compared with an increase of over 100% in First Class awards. Nevertheless, it means that out of every hundred graduates, ten extra obtained a 2.1 grade in 2008 as compared with their predecessors in 1994. This was in addition to an extra 9 out of every 100 obtaining a First. The R Squared figure for the line of best fit in Figure 6

below is .308 meaning that 30.8% of the variance from year to year in the 2.1 rate is attributable to the passage of time.

FIGURE 6: LEVEL 8 (HONOURS DEGREE) - 2.1 % 1994-2008



3. Analysis

Section Summary

This section examines the evidence on whether the increased rate of better grades is justified or results from declining standards and is, therefore, a product of grade inflation.

The question of whether the improved grades might be justified by genuine improvements in learning was examined by reference to potential selection effects improving the average educational quality of students admitted to the IOTs and to evidence on educational achievement at second level and in the IOTs. Nothing was identified which could help to explain why grades across the IOT sector should continuously improve. Grade inflation - declining achievement thresholds for the award of grades - remains the only plausible explanation.

Two additional patterns identifiable in the existing data on grades in the IOT sector were explored in detail. They are variance in higher grade percentages across the four disciplines and similar variance across the individual Institutes.

With respect to discipline variance, at Level 6 the average annual rates of Distinctions in Science/Technology and Engineering between 1994 and 2008 were 20.8% and 18%, respectively, as compared with 13.9% in the Humanities and 12.6% in Business. At Level 7, the comparable rates were 19% for both Science/Technology and Engineering, 11% for the Humanities and 13% for Business. At Level 8, the average annual rates of Firsts between 1994 and 2008 were 15.9% and 15.7% in Engineering and Science/Technology, respectively, as compared with 14% in Humanities and 9.5% in Business. In this paper it is hypothesised that differences in the educational ability of students entering courses across the four disciplines might account for the grade differences. An analysis of CAO course-entry points failed to support this hypothesis leading to the conclusion that higher grades are easier to get in Science/Technology and Engineering than in Business and Humanities throughout the IOT sector.

Great variance among Institutes in the rate of higher grades awarded was identified at all three Levels. Among Level 8 graduates, in 2003-04 and 2007-08, the highest awarding Institute conferred approximately 80% and 68% more combined First Class and 2.1 Honours Degrees than the lowest. The comparable figures for the discrepancies between the top and bottom Institutes at Level 7 were 66.8% and 78.4%. For Level 6 they were 51.4% and 78.4%. This variance was found not to be predicted by variance in the ability of students at entry as indicated by CAO points nor was it found to be a function of variance in the proportion of awards across the four disciplines among the 13 Institutes. At Level 8, smaller Institutes were on average found to have a disproportionately high percentage of better grades by comparison with their larger counterparts when the much weaker points' profile for entry to the smaller Institutes was taken into account. This strongly supports the 'institutional growth' theory of grade inflation advanced by O'Grady and Quinn (2007).

3.1 Is Grade Increase Caused by Grade Inflation?

3.1.1 Higher Grades at Higher Levels

Substantially more graduates at NFQ Levels 6, 7 and 8 obtained higher grades (top two grades together) in 2007-2008 combined compared with 2003-2004 combined. This was offset in Ordinary Degrees, but not in Higher

Certificates or Honours Degrees, by a drop in the rate of top grade (Distinction) awards. The overall increases were 13.5%, 6.7% and 16.9% respectively for Higher Certificates, Ordinary Degrees and Honours Degrees. In Higher Certificates and in Honours Degrees the rates of both the top two grades increased.

Accompanying the increase in grades, there was a significant increase in the proportion of graduates emerging with higher NFQ level qualifications. Table 13 below compares the number and proportion of overall graduates at NFQ Levels 6, 7 and 8 in 2007-2008 with 2003-2004.

A substantial upward shift in the distribution of graduates across the NFQ levels is in evidence. By 2007-08, Honours Degrees accounted for almost 39% of graduates across the 13 IOTs as compared with 28.6% in 2003-04. At the opposite end of the scale, the proportion of awards at Level 6 declined from 32.5% to 20.1%. The least change occurred at Level 7 with an increased proportion of just over two percentage points.

TABLE 13: NUMBER AND PROPORTION OF AWARDS ACROSS THE 13 INSTITUTES AT LEVELS 6, 7 AND 8 (AVERAGE OF 2007-2008 VS. AVERAGE 2003-2004)

| NFQ Level | Average Annual Number of Graduates (2003 & 2004) | % of Average Total Graduates (2003 & 2004) | Average Annual Number of Graduates (2007 & 2008) | % of Average Total Graduates (2007 & 2008) |
|------------------|--|--|--|--|
| 6 (Higher Cert) | 6170 | 32.5 | 3101 | 20.1 |
| 7 (Ordinary Deg) | 7372 | 38.9 | 6340 | 41.0 |
| 8 (Honours Deg) | 5424 | 28.6 | 6011 | 38.9 |
| Total | 18966 | 100 | 15452 | 100 |

Not only were graduates getting better grades in 2007-2008 but they were getting higher grades in academically more demanding, higher level courses. This must also be viewed in the context of the considerable grade inflation described by O’Grady and Guilfoyle (2007a) for the period 1994-2004. Is there anything that might justify the better grades in more demanding qualifications or is the grade increase simply a manifestation of grade inflation caused by falling standards?

The following are the potential justifications for grade increase that do not imply grade inflation:

1. A selection effect resulting in a substantial improvement in the average educational ability of students entering the IOTs over the period.
2. An improvement in education at second level feeding through to improved educational ability of students entering the IOTs over the relevant period.

3. A major nationwide transformation in education/teaching or in student motivation in the IOTs over the period resulting in improved learning for students.

3.1.2 A Selection Effect?

A selection effect might explain improved grades at graduation in the IOT sector. This would involve a trend over time of academically more capable students being attracted in greater numbers into the various Institutes. The majority of students in the IOT system come directly from school, entering through the CAO system. If students graduating in 2007 and 2008 had entered on significantly higher CAO points than those graduating in 2003 and 2004, there would be clear evidence of a selection effect. An alternative selection effect might have derived from a substantial increase in adults entering the IOTs over the relevant period. In the IOT sector, adults (aged 23 up) may be selected on the basis of interview as opposed to entering on the basis of CAO points. A selection effect based on an increased proportion of adult students would not, therefore, be reflected in CAO points' data.

3.1.2.1 The Impact of Mature Students

While there is no empirical evidence on the performance at graduation of adult students in IOTs, it might reasonably be expected that their maturity and their positive decision to return to education would render them more serious and hard-working than the average student. It is, of course, also possible that an extended period spent away from study and education between school and college together with poor prior educational achievement, which is true in a proportion of cases, may counterbalance the effects of their positive motivation. Results from a recent HEA analysis of drop-out rates from higher education offer mixed evidence. Mature students entering the IOT sector were less likely to drop out from Level 6 and 7 courses but no less likely from Level 8 than their younger class mates (Mooney et al 2001).

In the absence of any direct evidence on the performance of mature students, a sufficient rise in the proportion of mature students graduating in 2007 & 2008 by comparison with 2003 & 2004, might offer a plausible explanation for at least a proportion of the grade increase identified in the latter cohorts.

The earliest year for which national data was collected by the Department of Education and Skills on the age of undergraduate entrants to the IOT sector was 2000. Figures supplied directly by the Department to the author revealed that in 2000 (graduates in 2002, 2003 & 2004 at Levels 6, 7 and 8 respectively),

the proportion of mature students (aged 23 and over) entering the 13 Institutes at undergraduate level was 9% while in 2004 (graduates in 2006, 07, 08) the proportion was 10.7%. Even if every one of the additional 1.7% of students who were mature were to have obtained one of the top two grades in their qualifications, it would not nearly account for the number of additional top grades awarded in 2007-08 by comparison with 2003-04 (e.g. an additional 7.6 in every 100 students getting a 2.1 or a First at Level 8). The absolute increase in the number of mature students is far too small to have the impact on overall grade increase observed. A selection effect based on an increase in mature students has, therefore, to be rejected as an adequate explanation for the increased percentage of higher grades identified between 2004-05 and 2007-08.

3.1.2.2 *Are CAO Entrants Getting Academically Stronger?*

The biggest grade increase occurred at Level 8 - in Honours Degrees. If there is a trend of academically stronger school leavers entering the IOTs, it should be evident in an upward trend in CAO points among students taking Level 8 courses.

Students graduating with Honours Degrees in 2003 and 2004 would typically have commenced third level study in 1999 and 2000. Those graduating in 2007 and 2008 would have commenced in 2003 and 2004. This would be the case whether they entered at Level 6, 7 or 8. In all cases they would normally have taken 4 years to graduate. A comparison, then, of the CAO entry points for 1999-2000 with those for 2003-2004 across the 13 IOTs should reveal if there is evidence of a selection effect of this nature.

Table 14 below lists the percentage of courses in 1999-2000 and in 2003-2004 with minimum entry points below 200 and above 300 across the 13 Institutes, together with the average of all course minimum points and the numbers of Level 6/7 and Level 8 intakes on which the figures are based. All minimum points' figures are sourced from the CAO Website, *Points Required for Entry to Courses*: <http://www.cao.ie/index.php?page=points>

TABLE 14: CAO POINTS' PROFILE OF IOT COURSES IN 1999 & 2000 COMBINED AND IN 2003 & 2004 COMBINED*

| Minimum Points | 1999 & 2000* | 2003 & 2004** |
|------------------------------------|-------------------------|--------------------------|
| % courses <200 | 41.1 | 40.7 |
| % courses 300+ | 26.7 | 26.3 |
| Mean of Minimum Points | 208 | 219 |
| Number of Level 6/7 intakes | 508 | 495 |
| Number of Level 8 intakes | 68 | 174 |
| Total Course Intakes | 576 | 669 |

**A small number of courses in each year of the analysis could not be included since they employed alternative entry criteria such as tests, interviews or portfolios in place of standard CAO points.

CAO minimum entry points for each course do not tell us exactly what proportion of the students embarking on any course had points at or close to that minimum. Many will have points substantially above the minimum required. However, points are the currency which regulates the relationship between the supply of course places and the demand from applicants for those course places. When more students with higher points apply to enter a course, generally the points increase with the opposite happening when courses are less popular among students with higher points. If the supply of course places should decline for one reason or another, then minimum points should typically rise. Not surprisingly, then, there is a strong correlation between the typical points (as measured by the median) on which students enter courses and the minimum points reported by the CAO for those courses.

O’Grady and Guilfoyle (2007a) reported a correlation coefficient of $r = .788$ ($p < .001$) between minimum and median points for all Certificate and Diploma courses ($n=258$) across 13 Institutes of Technology in 2002. Analysis for the present paper of the minimum and median course entry points for all courses at Level 6 and 7 in the combined years 2002-2007 across the 13 Institutes found a correlation of $.755$ ($p < .001$). An equivalent analysis over the same period for Level 8 courses revealed a correlation coefficient of $.831$ ($p < .001$). Such consistently high correlations clearly validate the use of minimum points as an indicator of typical points possessed by students on those courses. In the absence of median points for 1999-2000 (CAO did not begin to report median points until 2002), minimum course entry points serve as a sound alternative.

An examination of Table 14 above shows that there was little change in minimum points from the 1999-2000 to the 2003-2004 intakes. Average minimum requirements for courses across the board went up by a marginal 11 points with the proportion of courses requiring more than 300 and less than 200 points remaining essentially unchanged. It might reasonably be expected that, when the proportions of Firsts and 2.1s increase, the proportion of students entering such courses with higher points will also be found have increased. The lack of any increase in the proportion of courses with minimum points above 300 suggests that this did not happen to any significant extent. To check if there might have been an upward shift in minimum points above the 300 threshold, a comparison of course intakes in 1999 & 2000 with 2003 & 2004 was conducted within narrower points’ bands. This analysis is summarised in Table 15 below.

TABLE 15: CAO POINTS’ PROFILE FOR LEVEL 6, 7 AND 8 COURSES REQUIRING 300+ POINTS IN 1999 & 2000 COMBINED AND IN 2003 & 2004 COMBINED

| Minimum Points | 1999 & 2000 (% of all courses) | 2003 & 2004 (% of all courses) |
|----------------|--------------------------------|--------------------------------|
| 300-349 | 18.1 | 16.9 |
| 350-399 | 6.3 | 6.9 |
| 400+ | 2.4 | 2.5 |

As evident in the table, the distribution of the relatively higher points' courses remained essentially unchanged between the two sets of intakes, offering no evidence of any improvement in the academic ability of students which might help explain the increase in Firsts and in 2.1 awards.

3.1.2.3 *The Advent of Ab Initio Degrees in Nursing*

Could the nationwide launch in 2002 of *ab initio* Level 8 courses in Nursing Studies explain the increase in higher grades identified in the 2007-2008 graduation cohorts? A significant number of *ab initio* nursing students were among the 2007-2008 graduates but such graduates did not exist in 2003-2004.

The points for 2003-2004 include those for all Nursing Studies students – mainly school leavers - who entered through the standard CAO process. Mature students entered through a non-standard selection system and the points used in the above comparison do not, therefore, include mature students. Given that we are dealing with some 5,000 to 6,000 Level 8 graduates per year, the number of mature Nursing Studies students in the IOT system (145 places in 2002 the only year for which figures are available on the CAO website), is too small to have any major impact on the overall Level 8 grade percentages across the IOT sector, as reported above.

There is another reason, however, to suspect that the emergence of Level 8 *ab initio* nursing courses might have a grade increasing impact on the 2007 and 2008 graduate groups. In a study of the first cohort of such students to graduate in 2006, O'Grady (2008) found that some IOTs awarded exceptionally high proportions of First Class and 2.1 grades. If this trend had spread in 2007 and 2008, it could account for a significant amount of the Level 8 grade increase described above. Fortunately, the data available for 2007 & 2008 allowed for this hypothesis to be tested. In the first instance, if the Nursing Studies graduates were indeed doing unusually well, Level 8 grade increase in 2007 & 2008 should be specific to the Science and Technology discipline. A glance at Table 10 above (p.15) reveals that, while Science and Technology at 25.9% does indeed show the highest amount of increase in the top two grades, it is only marginally higher than Engineering at 24.8%. There was substantial grade increase in Business, also, at 15.8%. Humanities, too, evidenced an increase, though a more marginal one of 4.1%. While Nursing Studies graduates could, on the basis of this information, have contributed somewhat to the Science and Technology grade increase, they can in no way offer an explanation for the findings in the other disciplines.

A further test of the impact of Nursing Studies graduates was possible because three of the six IOTs delivering such courses differentiated the results for Nursing Studies graduates from those of other Science and Technology courses in the 2005-2008 figures. They were Tralee, Dundalk and GMIT. A fourth Institute, Waterford, included the results for Nursing Studies in a category entitled Health Sciences for 2007 (Waterford failed to return data for 2008). While the category includes a few other courses, it nevertheless allows, Nursing Studies results to be differentiated from those of the bulk of other Science and Technology Courses at Waterford. The figures for the four Institutes are listed in Table 16 below.

Across the four Institutes, among a total of 891 Nursing Studies graduates in 2007 and 2008, 51.3% obtained a First or a 2.1. Comparing this figure with that of 51.8% for the total of all Science graduates shown in Table 10 above (p.15), it is clear that Nursing Studies graduates do not explain the increase in higher grades identified in 2007-08 for the Science and Technology discipline or for Level 8 graduates as a whole. A selection effect based on the emergence of the new Level 8 courses in Nursing Studies has, therefore, to be discounted.

TABLE 16: PERCENTAGE 1st AND 2.1 GRADES AMONG NURSING STUDIES GRADUATES IN 4 INSTITUTES IN 2007 & 2008

| Institute | Year | Number of Graduates | Number of 1 st Awards | Number of 2.1 Awards | % 1 st | % 2.1 | % 1 st +2.1 |
|-------------------|----------|---------------------|----------------------------------|----------------------|-------------------|-------|------------------------|
| Tralee | 2007 | 140 | 37 | 38 | 26.4 | 27.1 | 53.6 |
| | 2008 | 107 | 24 | 26 | 22.4 | 24.3 | 46.7 |
| | Av 07-08 | 124 | 30.5 | 32 | 24.7 | 25.9 | 50.6 |
| Dundalk | 2007 | 104 | 8 | 32 | 7.7 | 30.8 | 38.5 |
| | 2008 | 114 | 10 | 55 | 8.8 | 48.2 | 57.0 |
| | Av 07-08 | 118 | 21.9 | 36.6 | 18.6 | 31.1 | 49.7 |
| GMIT | 2007 | 91 | 10 | 32 | 11.0 | 35.2 | 46.2 |
| | 2008 | 47 | 7 | 16 | 14.9 | 34.0 | 48.9 |
| | Av 07-08 | 106 | 18.6 | 33.5 | 17.6 | 31.7 | 49.3 |
| Waterford* | 2007 | 288 | 54 | 108 | 18.8 | 37.5 | 56.3 |
| | Av 07-08 | 288 | 54 | 108 | 18.8 | 37.5 | 56.3 |
| TOTAL | 07 - 08 | 891 | 150 | 307 | 16.8 | 34.5 | 51.3 |

* Figures include graduates in a few other health related courses. The 2008 figures were not provided by Waterford.

3.1.3 Improvements in Second Level Education?

Since the vast majority of IOT entrants come directly from school, any improvements between 1999 and 2004 in the overall success of the educational endeavour at second level should have a positive impact on student performance

at third level in the following years, perhaps explaining at least some proportion of the grade increase. Such improvements, if they took place, should be reflected in improved CAO points through better Leaving Certificate performance. The fact that there was no evidence of any significant change in minimum points for students entering the IOTs between 1999-2000 and 2003-2004 renders this unlikely.

In addition, there is another source of compelling evidence to refute the notion of improvements in second level education. It comes from the OECD PISA study carried out in Ireland and across the globe every three years since 2000 (Cosgrove et al., 2010). This is a standardised assessment of reading literacy, mathematical literacy and scientific literacy of a representative national sample of 15 year olds in the different countries involved. It allows for comparison of educational success over time and across countries.

The PISA 2009 results showed that in Ireland reading literacy had declined significantly since 2000. No other country of the 31 developed countries included showed as large a decline. The PISA reading scale divides students into different levels of reading proficiency. Between 2000 and 2009, the proportion in the lowest level increased by 50%, from 11% to 17.2%, while those at the upper end, classed as ‘very good readers’ more than halved, dropping from 14.2% to 7% (Cosgrove et al, 2010). It is this latter group, in particular, that one would expect to go on to achieve higher grades at third level. Cosgrove et al. (2010) concluded that the decline in reading literacy was not just at the extremes but was “*evenly distributed across levels, and so cannot be attributed to higher or lower achievers doing exceptionally poorly* (p.1).” This is an important finding, in that it is not those at the top or the bottom of the ability distribution, as evidenced by CAO points, which make up the vast bulk of IOT students. It is those in the middle. They too were found to have been declining in performance.

The decline in reading literacy was already in evidence in the 2006 PISA study but at that time it had not reached a statistically significant level (Cosgrove et al., 2010, p1). Of course, it is a pattern of considerable improvement, not decline, which would be required to help explain the grade increase in the IOT sector described above.

Previously, a comparison of the 2000 and 2006 PISA studies showed no improvement in mathematical or scientific literacy among Irish 15 year olds (Eivers, Shiel, & Cunningham, 2008). The 2009 study revealed that mathematical literacy had declined since 2003, that the decline was statistically significant and that it was evenly distributed across the range of achievement. Only one other country showed a greater drop in mathematical performance. Scientific literacy showed no significant change since 2006 (Cosgrove et al, 2010).

The PISA findings with respect to Mathematics are of particular importance to third level performance, in that achievement in Mathematics at second level has been identified in a recent important study as a key predictor in ability to cope at third level. In a HEA report on progression in higher education, Mooney et al., 2010, states the following:

“This report demonstrates that there is a strong correlation between students’ educational attainment at secondary level and their subsequent success in progressing through higher education. This is reflected in the multivariate analysis, which shows that the influence of students’ gender and socio-economic background on their progression through higher education is mediated mostly through their prior educational attainment. In particular students’ mathematical abilities appear to have a strong bearing on their capacity to engage with higher education (p. 59).”

Educational achievement in the core competencies of Reading, Mathematics and Science, as assessed by international standards, has either been static or in decline during the period relevant to this present study. There are various explanations offered for those trends, including an increasing proportion of students at second level who do not have English as their first language, lack of resources in schools and an increase in students with special needs (Education Matters, 2010). No explanation, however, is likely to be commensurate with a picture where students are being better prepared than formerly in second level for third level study. The fact that the declines in reading and mathematical literacy are distributed evenly across the performance spectrum demonstrates that the problem is not only afflicting a select sub group. Poorer learning is characteristic of all second level students across the board. For whatever reason, achievement in core educational skills has declined at second level and this should logically result in a reduction instead of an increase in higher grades among graduates at third level. The PISA results add much weight to already compelling evidence of continuing grade inflation in the IOT sector.

3.1.4 Improvements in Education in the IOTs?

In theory, a pattern of improved grades across the IOTs in a given period could be the product of improved educational techniques or methodologies. There is compelling evidence that this is not the case. If such improvements occurred since 2004 it would be expected that they would have been widely reported and the novel educational methodologies explained. There is no evidence of this being so. Moreover, as illustrated in Figures 1 – 6 in Section 2 above, the grade increase between 2004 and 2008 represents the continuation of a similar pattern going back at least to 1994. It is impossible to imagine that a process of continuously improving educational delivery could have pervaded the sector over such a long period without its nature being understood and widely publicized.

The findings with respect to second level education, outlined in 3.1.3 above, strongly suggests that the grade increase that has characterised the Leaving Certificate Examination (O’Grady, 2009) is due to grade inflation not genuine improvements in education. That marked grade increase can take place in one Irish educational sector in the absence of improved education, offers strong *prima facie* evidence that this is true of another, particularly one where, in contrast to second level, there is no separation of the responsibilities for educational delivery and for grading. In the IOTs the same individuals, the lecturers, are responsible for both processes.

Over the period since 1994 when marked grade increase in the IOT sector has been in evidence, the IOTs have recruited an increasing proportion of academically weaker students as indicated by the CAO points analysis reported in O’Grady and Guilfoyle, 2007a. This is not commensurate with a significant improvement in genuine educational achievement across the board over and above the baseline of the early nineties. There is evidence that the IOTs have in recent years devoted considerable resources to assisting students at the weaker end of the spectrum, those with specific learning disabilities in particular. While there is no overall appraisal of those efforts to assess their efficacy, it is inevitable that any learning improvements would be reflected at the lower end of grading spectrum. Students in need of remedial attention are much more likely to be protected from failing or, at best, to be raised from a pass to a Merit 2, as opposed to achieving a Merit 1 or a Distinction. This should produce increases in the lower grades not the upper grades, which is the pattern identified here and which requires explanation. Delivering considerably improved learning, particularly learning of a standard to merit upper grade awards, among cohorts of much weaker students in higher level more demanding qualifications (see sections 2.1.1, 2.2.1 and 2.3.1 above) is a feat well beyond credibility in the absence of a hitherto unknown transformation in educational methodology.

The theory that grade increase in the IOT sector may be due to improvements in education across the IOT sector must on the present evidence be rejected.

3.2 Variation across the Institutes in Rate of Higher Grade Awards

3.2.1 Extent of Variation

Great variation is evident across the 13 Institutes in their rates of higher grade awards. Tables 17, 18 and 19 below contrast the percentages in the highest and lowest awarding Institute in each case for the combined years of 2003 & 2004 and of 2007 & 2008. As indicated in the footnotes for Tables 18 and 19, the

figures for Dun Laoghaire were excluded because of the relatively small number of students on which they were based. The number of graduates on which the figures are based can be seen for Levels 6, 7 and 8 in Tables 3 (p.7), 7 (p.11) and 11 (p.16), respectively, above.

Among Level 8 graduates, in 2003 & 04 the highest awarding Institute conferred approximately 80% more First or 2.1 Honours Degrees than the lowest. The equivalent figure for 2007 & 2008 was 68%. The comparable figures for the discrepancies between the top and bottom Institutes at Level 7 were 66.8% and 78.4%. For Level 6 they were 51.4% and 78.4%.

TABLE 17: LEVEL 8 (HONOURS DEGREE) - CONTRAST IN RATES OF HIGHER GRADES BETWEEN HIGHEST AND LOWEST AWARDING INSTITUTES (2007 & 2008 COMBINED VS. 2003 & 2004 COMBINED)

| Level 8 | Institute | % |
|--------------------------------------|----------------|------|
| Highest Rate: Firsts (2003-04) | Blanchardstown | 29.8 |
| Lowest Rate: Firsts (2003-04) | Athlone | 9.2 |
| Highest Rate: Firsts (2007-08) | Cork | 20.4 |
| Lowest Rate: Firsts (2007-08) | Dundalk | 8.2 |
| Highest Rate: Firsts + 2.1 (2003-04) | Cork | 59.1 |
| Lowest Rate: Firsts + 2.1 (2003-04) | Dundalk | 32.8 |
| Highest Rate: Firsts + 2.1 (2007-08) | GMIT | 59.9 |
| Lowest Rate: Firsts + 2.1 (2007-08) | Tallaght | 35.6 |

Taking the top grade alone, First or Distinction, the contrast between the lowest and highest awarding Institutes grows even starker. For Level 8, the top awarding Institute conferred 223.9% as many Firsts as the lowest awarder in 2003-2004 and 148.8% in 2007-2008. The comparable figures for Distinctions at Level 7 were 131.3% and 115.8%. For Level 6 they were 82% and 111.3%.

TABLE 18: LEVEL 7 (ORDINARY DEGREE) - CONTRAST IN RATES OF HIGHER GRADES BETWEEN HIGHEST AND LOWEST AWARDING INSTITUTES (2007 & 2008 COMBINED VS. 2003 & 2004 COMBINED)

| Level 7 | Institute | % |
|--|----------------|------|
| Highest Rate: Distinctions (2003-04) | Blanchardstown | 26.6 |
| Lowest Rate: Distinctions (2003-04) | Limerick | 11.5 |
| Highest Rate: Distinctions (2007-07) | Cork | 21.8 |
| Lowest Rate: Distinctions (2007-08) | Waterford | 10.1 |
| Highest Rate: Dist. + Mer. 1 (2003-04) | Blanchardstown | 52.7 |
| Lowest Rate: Dist. + Mer. 1 (2003-04) | Athlone | 31.6 |
| Highest Rate: Dist. + Mer. 1 (2007-08) | Cork | 54.6 |
| Lowest Rate: Dist. + Mer. 1(2007-08)* | Tallaght | 30.6 |

* Dun Laoghaire had a lower percentage but as the total number of students involved was relatively small (67), and small groups are amenable to large variations in academic ability from year to year, Tallaght, the Institute with the next lowest figure, was chosen instead to illustrate the range.

Such large discrepancies between Institutes in the rate of higher grades awarded require explanation. In the absence of any satisfactory explanation, it would appear that grade rates can vary at random from Institute to Institute which lends further weight to the grade inflation hypothesis. If grades can vary geographically without reference to actual performance, then there is nothing to prevent the variance over time that underpins grade inflation.

Large disparities between Institutes on their rates of higher grades awarded would be expected if the average academic ability of the students attracted to the different Institutes varied very considerably. Any suggestion, however, that the quality of the educational process or the motivation (unrelated to second level performance) of students could vary so extremely across Institutes defies credibility.

If there were, indeed, major variations in the ability of the students attracted to the different Institutes, it should be readily evident in the CAO points on which students entered the different Institutes. Moreover, those points' differences should correlate quite strongly with the rates of higher grades awarded across the Institutes. In the following sections the Institutes are compared in terms of the points' profiles of their student entrants and in terms of their rate of First Class and 2.1 awards at Level 8.

TABLE 19: LEVEL 6 (HIGHER CERTIFICATE) - CONTRAST IN RATES OF HIGHER GRADES BETWEEN HIGHEST AND LOWEST AWARDING INSTITUTES (2007 & 2008 COMBINED VS. 2003 & 2004 COMBINED)

| Level 6 | Institute | % |
|---|-----------|------|
| Highest Rate: Distinctions (2003-04) | Waterford | 23.3 |
| Lowest Rate: Distinctions (2003-04) | Athlone | 12.8 |
| Highest Rate: Distinctions (2007-08) | Carlow | 31.9 |
| Lowest Rate: Distinctions (2007-08)* | Limerick | 15.1 |
| Highest Rate: Dist. + Mer. 1 (2003-04)* | Cork | 43.0 |
| Lowest Rate: Dist. + Mer. 1 (2003-04) | Athlone | 28.4 |
| Highest Rate: Dist. + Mer. 1 (2007-08) | Carlow | 52.0 |
| Lowest Rate: Dist. + Mer. 1(2007-08)* | Tallaght | 30.6 |

*In each case Dun Laoghaire had a more extreme percentage but as the total number of students involved in each case was quite small (16 and 56), the Institute with the next highest or lowest figure was chosen instead to illustrate the range.

3.2.2 Use of Course Minimum Points to Compare Academic Ability of Students across Institutes

The validity of minimum points' scores as indicators of the academic strength of student cohorts at intake is discussed above in section 3.1.2.2. (pp. 22-24) An additional issue, however, arises when comparing points' profiles at different Institutes. The percentages of courses requiring a set minimum number

of points, e.g. 300, and the average of minimum points across courses do not take into account the varying number of students entering each course. An individual course in the IOT sector may have an intake as small as one or two or as large as a few hundred. It is possible, therefore, for an Institute to have, for example, a low proportion of courses with a minimum requirement for at least 300 points and still have a relatively large proportion of students with such higher points. This could arise if its 300+ points' courses had very large student intakes by comparison with lower points' courses. A consistent trend of this nature across all Institutes would not be a problem but the comparison between Institutes would be misleading if such a correlation between higher points' courses and larger student intakes characterised some Institutes but not others.

While the numbers admitted to each course were not available for 1999-2000 or 2003-2004, they were published by the CAO for 2002. The 2002 figures were analysed to identify the extent to which three points' profile indicators (proportion of courses requiring 300+ points, proportion of courses admitting students on less than 200 points and the mean of course points) are predictive of the actual proportion of students entering individual Institutes on higher points' courses.

Dun Laoghaire was not included in this analysis because of its unusually high proportion of non-standard points' courses. At each of the remaining 12 IOTs the numbers of student places available on every course requiring 300+ points were added up. The same was done for courses demanding less than 200 points. In this way the actual number of students admitted on those courses were calculated for each Institute and expressed in each case as a percentage of total student places at the Institute. Table 20 below compares the proportion of courses requiring 300+ points with the percentage of total student places on those courses, does the same for courses with points' requirements below 200 and lists the mean or average of the minimum points for all courses in each Institute.

A high degree of association between the percentage of courses requiring given points and the percentage of total student places on those courses together with a high degree of association between those figures and the average of minimum points would validate the use of the three points' indicators employed here as indicators of average student ability in each Institute.

TABLE 20: COMPARISON FOR 2002 OF PERCENTAGES OF COURSES WITH GIVEN MINIMUM POINTS' THRESHOLDS AND OF MEAN MINIMUM POINTS WITH PERCENTAGES OF STUDENTS ENTERING COURSES WITH THE SAME MINIMUM POINTS' THRESHOLDS

| Institute | % of students admitted on courses requiring 300+ points | % of courses requiring 300+ points | % of students admitted on courses requiring <200 points | % of courses requiring <200 points | Mean of minimum points for all entry courses |
|----------------|---|------------------------------------|---|------------------------------------|--|
| Cork | 57.9 | 53.1 | 10 | 6.3 | 311 |
| Waterford | 42.3 | 43.9 | 0 | 0 | 282 |
| Limerick | 40.0 | 33.3 | 8.7 | 12.5 | 259 |
| GMIT | 36.5 | 26.8 | 42.5 | 51.2 | 204 |
| Sligo | 25.9 | 21.4 | 30.5 | 46.4 | 209 |
| Tralee | 9.6 | 13.0 | 42.4 | 52.2 | 196 |
| Tallaght | 5.3 | 9.1 | 47.8 | 45.5 | 185 |
| Letterkenny | 6.8 | 9.1 | 82.9 | 81.8 | 119 |
| Carlow | 7.8 | 8.3 | 70.5 | 66.6 | 163 |
| Athlone | 15.1 | 8.0 | 67.1 | 68.0 | 152 |
| Dundalk | 5.4 | 6.1 | 68.6 | 54.5 | 157 |
| Blanchardstown | 0 | 0 | 0 | 0 | 266 |

A cursory visual examination of Table 20 above indicates that there is a very high degree of association across the measures. Pearson Product Moment correlations were calculated to quantify the degree of association. Table 21 below summarises the results

TABLE 21: CORRELATIONS BETWEEN PERCENTAGES OF COURSES WITH GIVEN MINIMUM POINTS THRESHOLDS, MEAN OF COURSE MINIMUM POINTS AND PERCENTAGES OF STUDENT PLACE, USING 2002 ENTRY FIGURES FOR 12 INSTITUTES

| Variables Correlated | Pearson r | Significance |
|--|-----------|--------------|
| % student places on 300+ points courses with % 300+ points courses | .974 | .000 |
| % student places on <200 points courses with % <200 points courses | .965 | .000 |
| % student places on 300+ points courses with average minimum points score across all courses | .698 | .012 |
| % student places on <200 points courses with average minimum points score across all courses | -.958 | .000 |

From the size of the correlations, which could scarcely be higher, it is clear that the percentage of courses at an Institute in either of the two points' bands and the number of course places in either of the two bands may be taken as virtually identical pieces of information. The same may be said of the two figures, percent of student places on courses with points below 200 and overall average minimum points across all courses at each Institute. In all cases over

90% of the variance (square of r.) in one is attributable to or may be explained by the other. The average minimum points for all courses at an Institute is not so accurate, however, at predicting the proportion of students at that Institute admitted on courses requiring 300 points and above. Only 49% of the variance in one can be predicted by the other.

With some hesitation about the value of average minimum points, the evidence from the 2002 figures very strongly justifies the use of the points' indicators used in this study. In the absence of actual proportions of students entering higher or lower points' courses, the percentage of such courses at an Institute serves as a perfectly adequate alternative.

3.2.3 Correlations between Points' Measures and Grades

3.2.3.1 Rank Order Correlations

Having established the validity of points' measures based on courses, it was hypothesised that they should strongly predict the grade profiles at graduation within Institutes. This should produce a clear match between each Institute's rank order position on the course points' profile measures and its rank order on the proportion of higher grades awarded at graduation. Institutes were, therefore, rank ordered on the three minimum points' measures and the two measures of higher grades using the data for both the 2003 & 2004 and the 2007 & 2008 graduates.

Spearman Rho rank order correlation coefficients were calculated to establish the relationship between grade ranks and ranks on minimum point measures. The correlations are summarised in Tables 22 and 23 below. The actual ranks on which the correlations are based are listed in Tables 25, 26, 28 and 29.

TABLE 22: CORRELATIONS BETWEEN INSTITUTE GRADE RATE RANKS AND INSTITUTE POINTS' PROFILE RANKS FOR LEVEL 8 GRADUATES IN 2003 & 2004 COMBINED

| Variables Correlated | N | Rho | p* |
|---|----|------|------|
| First Class ranks by ranks on % courses <200 points | 12 | .504 | .094 |
| First Class ranks by ranks on % courses with 300+ points | 12 | .524 | .080 |
| First Class ranks by ranks on mean of minimum course points | 12 | .529 | .077 |
| 1 st + 2.1 ranks by ranks % courses <200 points | 12 | .539 | .070 |
| 1 st + 2.1 ranks by ranks on % courses with 300+ points | 12 | .573 | .051 |
| 1 st + 2.1 ranks by ranks on mean of minimum course points | 12 | .564 | .056 |

* two-tailed test

Of the 12 rank order correlation coefficients computed, only one reached statistical significance. That was for the correlation between Institute ranks on percentage of combined Firsts and 2.1 grades and percentage of courses requiring 300+ points in 2007 & 2008. The same correlation coefficient for the

2003 & 2004 graduates only barely failed to reach significance. The correlation between ranks on percentage of combined Firsts and 2.1 grades and ranks on the mean of minimum course points for 2003 & 2004 graduates also missed being statistically significant by a very narrow margin. Statistical significance is difficult to reach with only twelve cases but the size of the actual correlation coefficients indicates that the rank orders do not generally match each other at all closely. In this context, it is worth noting that a set of pairs of 12 ranks offset by 3 ranks in each case, e.g. where 1 goes with 4, 2 with 5, 3 with 6 and so on, produces a rank order correlation coefficient of .622. Only a single coefficient reached that level.

TABLE 23: CORRELATIONS BETWEEN INSTITUTE GRADE RATE RANKS AND INSTITUTE POINTS' PROFILE RANKS FOR LEVEL 8 GRADUATES IN 2007 & 2008 COMBINED

| Variables Correlated | N | Rho | p* |
|---|----------|------------|-----------|
| First Class ranks by ranks on % courses <200 points | 12 | .060 | .854 |
| First Class ranks by ranks on % courses with 300+ points | 12 | .517 | .085 |
| First Class ranks by ranks on mean of minimum course points | 12 | .182 | .572 |
| 1 st + 2.1 ranks by ranks % courses <200 points | 12 | .081 | .803 |
| 1 st + 2.1 ranks by ranks on % courses with 300+ points | 12 | .720 | .008 |
| 1 st + 2.1 ranks by ranks on mean of minimum course points | 12 | .231 | .471 |

* two-tailed test

Not surprisingly, the percentage of courses requiring 300+ points acts as the best predictor of grade ranks. It is those with points above that level one might expect to get better grades.

In order to tease out the implications of the low rank order correlations, the individual rank order comparisons for the 2007 & 2008 and the 2003 & 2004 graduates are examined separately in detail below.

3.2.3.2 Comparison of Institutes' Points Profiles and Level 8 Grades in 2007-2008

In addition to listing the percentage of Firsts and the percentage of combined Firsts and 2.1s awarded at each Institute at Level 8 (Honours Degree) in 2007 & 2008, Table 24 below lists the average or mean of the minimum points across all course intakes in 2003 & 2004 (normal years in which 2007 & 2008 Level 8 graduates would have commenced), the proportion of courses requiring 300 or more points and the proportions admitting students at below 200 points. The points for Level 6 (Higher Certificate) and 7 (Ordinary Degree) as well as Level 8 courses need to be included because, in addition to those entering on *ab initio* Level 8 courses, a high proportion of Honours Degree graduates originally enter at Level 6 or 7 and progress through such courses to Level 8.

An examination of Table 24 below reveals striking mismatches between the award of higher grades and the entry points at individual Institutes for those graduating with Honours Degrees in 2007 and 2008.

TABLE 24: BY INSTITUTE COMPARISON OF PERCENTAGE HIGHER GRADES AWARDED AT LEVEL 8 IN 2007 AND 2008 COMBINED WITH CAO ENTRY POINTS FOR LEVELS 6, 7 AND 8 COURSES IN 2003 AND 2004 COMBINED *

| Institute | % 1 st (07 & 08) | % 1 st + 2.1 (07 & 08) | Number of course intakes (03 & 04)** | Mean points (03 & 04) | % of courses requiring 300 + points (03 & 04) | % of courses requiring <200 points (03 & 04) |
|----------------|--------------------------------|---|---|-----------------------------|--|---|
| Cork | 20.4 | 59.1 | 67 | 276 | 46.2 | 19.5 |
| Carlow | 20.0 | 55.0 | 45 | 177 | 19.9 | 66.7 |
| Tralee | 18.6 | 41.2 | 53 | 231 | 28.4 | 39.7 |
| GMIT | 18.3 | 59.9 | 75 | 199 | 25.4 | 52.0 |
| Sligo | 17.9 | 54.7 | 56 | 209 | 17.9 | 50 |
| Letterkenny | 16.9 | 42.3 | 50 | 146 | 8.0 | 80 |
| Waterford | 16.4 | 57.5 | 83 | 279 | 45.0 | 0 |
| Blanchardstown | 16.1 | 36.5 | 18 | 252 | 11.1 | 0 |
| Limerick | 15.2 | 58.7 | 53 | 262 | 41.5 | 22.6 |
| Tallaght | 12.1 | 35.6 | 26 | 210 | 7.7 | 42.2 |
| Athlone | 10.7 | 47.0 | 59 | 186 | 18.7 | 62.7 |
| Dundalk | 8.1 | 47.2 | 74 | 168 | 10.8 | 56.8 |

* Dunlaoghaire was omitted from this analysis because of the high proportion of courses using non-standard entry requirements

** The intakes in 2003 are added to those for 2004 so that courses which have intakes in both years, as most do, are counted twice

Table 25 below allows for easier identification of the discrepancies. It lists the Institutes in order of their respective rates of award of First Class degrees and compares that rate with each Institute's rank order position on the three minimum points' summaries.

Waterford has the best points' profile overall but ranks only seventh in the award of Firsts while Carlow with one of the weakest points' profiles ranks number 2, only marginally behind Cork which has the second best points' profile. Limerick, with the third best points' profile, lies 9th in the rank order for award of Firsts. Letterkenny, with the weakest profile of points, nevertheless, ranks 6th in the First Class order. Other Institutes with ranks on points lagging behind those for the award of Firsts are GMIT, Sligo and, to an extent, Tralee. Other Institutes showing better points' ranks than ranks for First Class awards are Athlone and Dundalk. Blanchardstown and Tallaght show anomalous points' profiles. Both rank very low on the proportion of courses requiring over 300 points but much higher on the other two points' summaries. Their ranks for rate

of Firsts match relatively closely their ranks for proportion of courses with points of 300 and above but are low by comparison with their mean course minimum points and the proportion of courses with points below 200.

TABLE 25: INSTITUTES RANKED IN ORDER OF % 1ST CLASS LEVEL 8 DEGREES IN 2007 & 2008 COMBINED TOGETHER WITH THEIR RANKS ON THREE POINTS' PROFILE INDICATORS ACROSS ALL LEVEL 6, 7 AND 8 COURSES IN 2003 AND 2004 COMBINED

| Rank on award of 1 st | Institute (% 1 st) | Rank* (% of courses requiring <200 points) | Rank (% of courses requiring 300+ points) | Rank (mean of min points across all courses) |
|----------------------------------|--------------------------------|--|---|--|
| 1 | Cork (20.4%) | 2 | 1 | 2 |
| 2 | Carlow (20.0%) | 10 | 6 | 10 |
| 3 | Tralee (18.6%) | 4 | 4 | 5 |
| 4 | GMIT (18.4%) | 7 | 5 | 8 |
| 5 | Sligo (17.9%) | 6 | 8 | 7 |
| 6 | Letterkenny (16.9%) | 11 | 11 | 12 |
| 7 | Waterford (16.4%) | 1 | 2 | 1 |
| 8 | Blanchardstown (16.1%) | 1 | 9 | 4 |
| 9 | Limerick (15.2%) | 3 | 3 | 3 |
| 10 | Tallaght (12.1%) | 5 | 12 | 6 |
| 11 | Athlone (10.7%) | 9 | 7 | 9 |
| 12 | Dundalk (8.1%) | 8 | 10 | 11 |

* The ranks in this column run from smallest % at 1 to largest % at 11 with Waterford and Blanchardstown sharing rank No 1, neither having any courses with minimum points less than 200. The other two points' rankings run from highest % at 1 to least at 12 as do the ranks in column 1 on award of firsts.

Table 26 below matches the rank order among the Institutes for the award of combined First and 2.1 grades with their rank order on the three minimum points' summaries. As with the award of First Class degrees described above, the discrepancies between the ranks on points and on combined upper grades' awards are immediately evident.

The top six awarders of higher grades ranging from GMIT (59.9%) to Sligo (54.7%) are differentiated by little over 5 percentage points. Three of those six – Waterford, Limerick and Cork – are ranked 1-3 on all three points' summaries. However, both Tralee and Blanchardstown, with ranks 10 and 11 for the award of the top two grades combined, have better overall point's profiles than the remaining three: GMIT, Carlow and Sligo. GMIT, with the highest rate of top grades, stands out as having a weak points' profile by comparison, ranking at positions 7, 5 and 8 on the three measures. Carlow also seems to be in an anomalous position with its 5th place rank in the award of top grades compared with ranks of 10 on two of the three points' measures. However, it ranks at number six place in the proportion of courses requiring 300+ points.

TABLE 26: INSTITUTES RANKED IN ORDER OF % 1ST + 2.1 LEVEL 8 DEGREES IN 2007 & 2008 COMBINED TOGETHER WITH THEIR RANKS ON THREE POINTS' PROFILE INDICATORS ACROSS ALL LEVEL 6, 7 AND 8 COURSES IN 2003 AND 2004 COMBINED

| Rank on award of 1 st + 2.1 | Institute (% 1 st + 2.1) | Rank (% of courses requiring <200 points)* | Rank (% of courses requiring 300+ points) | Rank (mean of min points across all courses) |
|--|-------------------------------------|--|---|--|
| 1 | GMIT (59.9%) | 7 | 5 | 8 |
| 2 | Cork (59.1%) | 2 | 1 | 2 |
| 3 | Limerick (58.7%) | 3 | 3 | 3 |
| 4 | Waterford (57.5%) | 1 | 2 | 1 |
| 5 | Carlow (55%) | 10 | 6 | 10 |
| 6 | Sligo (54.7%) | 6 | 8 | 7 |
| 7 | Dundalk (47.2%) | 8 | 10 | 11 |
| 8 | Athlone (47%) | 9 | 7 | 9 |
| 9 | Letterkenny (42.3%) | 11 | 11 | 12 |
| 10 | Tralee (41.2%) | 4 | 4 | 5 |
| 11 | Blanchardstown (36.5%) | 1 | 9 | 4 |
| 12 | Tallaght (35.6%) | 5 | 12 | 6 |

* Ranks run from smallest % at 1 to largest % at 11 with Waterford and Blanchardstown sharing rank No 1, neither having any courses with minimum points less than 200. The other two points' rankings run from highest % at 1 to least at 12 as do the ranks in column 1 on award of combined firsts and 2.1.

A comparison of some of the percentage figures reveals more starkly the discrepant findings. The proportion of courses requiring in excess of 300 points at Cork, Waterford, and Limerick are 46.2%, 45% and 41.5% with average minimum course points of 276, 279 and 262 respectively. GMIT, with only 25% of its courses necessitating 300 or more points and with an average minimum course points' tally of 199, had a higher rate of top grades. Carlow, with a rate of 55% Firsts and 2.1s lagged behind Waterford by only 2.5 percentage points (4.4% fewer top grades). This is despite Carlow having a rate of courses requiring over 300 points of only 19.9% and an average minimum course points' tally of 177. It is striking that Carlow, despite its low points' profile, also has the second highest rate of Firsts.

It seems clear that for 2007-2008 Honours Degree graduates there was no consistent relationship across Institutes between the minimum points on which students could enter courses and the likelihood of students graduating with better grades.

3.2.3.3 Comparison of Institutes' Points Profiles and Level 8 Grades in 2003-2004

An analysis of the 2003-2004 Level 8 (Honours Degree) graduates was conducted to check if the findings with respect to the mismatches between grades and point's profiles would be comparable to those for 2007-2008.

TABLE 27: BY INSTITUTE COMPARISON OF PERCENT UPPER GRADES AWARDED IN 2003 AND 2004 COMBINED WITH CAO ENTRY POINTS FOR COURSES IN 1999 AND 2000 COMBINED *

| Institute | % 1 st (03-04) | % 1 st + 2.1 (03-04) | Number of course intakes (99 & 00)** | Mean Points (99 & 00) | % courses requiring 300 + points (99 & 00) | % courses requiring <200 points (99 & 00) | % of courses requiring <100 points (99 & 00) |
|----------------|------------------------------|---------------------------------------|---|-----------------------------|--|---|---|
| Blanchardstown | 29.8 | 55.1 | 10 | 306 | 70.0 | 0 | 0 |
| Tallaght | 23.4 | 56.7 | 24 | 232 | 29.2 | 29.2 | 12.5 |
| GMIT | 16.8 | 55.8 | 75 | 232 | 29.4 | 34.6 | 9.3 |
| Carlow | 15.6 | 46.2 | 52 | 147 | 7.6 | 63.5 | 30.8 |
| Cork | 14.9 | 46.8 | 56 | 321 | 66.0 | 3.6 | 0 |
| Sligo | 13.4 | 47.4 | 59 | 167 | 11.9 | 57.6 | 22.0 |
| Waterford | 12.6 | 42.3 | 68 | 289 | 53.0 | 0 | 0 |
| Tralee | 11.9 | 34.1 | 40 | 177 | 10.0 | 50.0 | 25.0 |
| Letterkenny | 11.6 | 37.0 | 40 | 136 | 7.5 | 82.5 | 30.0 |
| Dundalk | 10.8 | 32.8 | 52 | 145 | 9.6 | 65.3 | 36.5 |
| Limerick | 9.8 | 38.9 | 42 | 257 | 33.3 | 26.2 | 0 |
| Athlone | 9.1 | 33.3 | 49 | 107 | 6.1 | 75.6 | 53.1 |

* Dunlaoghaire was omitted from this analysis because of the high proportion of courses using non-standard entry requirements

** The intakes in 1999 are added to those for 2000 so that courses which have intakes in both years, as most do, are counted twice

Table 27 above lists the percentage of Firsts and the percentage of combined Firsts and 2.1s awarded at each Institute in 2003 & 2004 combined. It also lists the average or mean of the minimum points across all Level 6, 7 and 8 course intakes in 1999 & 2000 (normal years in which the 2007-2008 Level 8 graduates would have commenced), the proportion of courses requiring 300 or more points and the proportions admitting students at below 200 points.

Table 28 below lists the Institutes in order of their respective rates of award of First Class degrees and compares that rate with each Institute's rank order position on the three minimum points' summaries. Even a cursory glance at Table 28 reveals obvious mismatches between Institutes' profiles of course minimum points and the rate of Firsts awarded. Waterford, Cork and Limerick have each got a profile of minimum points that suggests they should be towards the top of the Firsts' ranking, not occupying places 7, 5 and 11, as they respectively do. Carlow, Tallaght and GMIT all have higher ranks on the award of First Class degrees than their ranks on the three points' measures would seem to warrant.

Some examples using percentage figures illustrate the extent of mismatch between minimum points and the award of First Class degrees. Carlow, with average minimum course points of 147, with 63.5% of courses requiring less than 200 points and only 7.6% of its courses requiring 300 or more points, had a

higher rate of First Class awards than Cork or Waterford and much higher than Limerick. Cork, Waterford and Limerick had average minimum points' scores of 321, 289 and 257, respectively and 66%, 53% and 33% of their courses required in excess of 300 points. In Limerick, 26.2% of courses could be accessed with less than 200 points; in Cork, only 3.6% and in Waterford, no course had minimum points below 200.

TABLE 28: INSTITUTES RANKED IN ORDER OF % 1ST CLASS LEVEL 8 DEGREES IN 2003 & 2004 COMBINED, TOGETHER WITH THEIR RANKS ON THREE POINTS' PROFILE INDICATORS ACROSS ALL LEVEL 6, 7 AND 8 COURSES IN 1999 & 2000 COMBINED

| Rank on % award of 1 st | Institute (% 1 st) | Rank (% of courses requiring <200 points)* | Rank (% of courses requiring 300+ points) | Rank (mean of minimum points for all entry courses) |
|------------------------------------|--------------------------------|--|---|---|
| 1 | Blanchardstown (29.8%) | 1 | 1 | 2 |
| 2 | Tallaght (23.4%) | 4 | 6 | 5 |
| 3 | GMIT (16.8%) | 5 | 5 | 5 |
| 4 | Carlow (15.6%) | 8 | 10 | 8 |
| 5 | Cork (14.9%) | 2 | 2 | 1 |
| 6 | Sligo (13.4%) | 7 | 7 | 7 |
| 7 | Waterford (12.6%) | 1 | 3 | 3 |
| 8 | Tralee (11.9%) | 6 | 8 | 6 |
| 9 | Letterkenny (11.6%) | 11 | 11 | 10 |
| 10 | Dundalk (10.8%) | 9 | 9 | 9 |
| 11 | Limerick (9.8%) | 3 | 4 | 4 |
| 12 | Athlone (9.1%) | 10 | 12 | 11 |

* Ranks run from smallest % at 1 to largest % at 11 with Waterford and Blanchardstown sharing rank No 1 neither having any courses with minimum points less than 200. The % of courses at 300+ rankings runs from highest % at 1 to least at 12. The mean course minimum points' ranks run from highest mean at 1 to lowest at 11 with Tallaght and GMIT sharing rank No 5 as both had mean points of 232.

Another striking example is that of Tallaght. With a rate of 23.4% First Class degrees, it had 138.7% more Firsts than at Limerick, 85.7% more than at Waterford and 57% more than at Cork, despite having an average minimum points' score of 232, having 29.2% of its courses requiring over 300 points and 29.2% of its courses requiring less than 200 points. As the figures detailed in the last paragraph illustrate, Waterford, Limerick and Cork had better minimum points' profiles and in the cases of Waterford and Limerick, substantially better profiles.

When the two upper grades are combined in Table 29 below, it is notable that the range across the Institutes is considerably narrower than for Firsts. Where the top awarder of First Class degrees, Blanchardstown (29.8%) awarded over 3 times as many as the lowest awarder, Athlone (9.1%), the top awarder of the combined upper grades, Tallaght (56.7%) awarded less than twice as many as the lowest awarder, Dundalk (32.8%).

TABLE 29: INSTITUTES RANKED IN ORDER OF % 1ST + 2.1 LEVEL 8 DEGREES IN 2003 AND 2004 COMBINED, TOGETHER WITH THEIR RANKS ON THREE POINTS' PROFILE INDICATORS ACROSS ALL LEVEL 6, 7 AND 8 COURSES IN 1999 AND 2000 COMBINED

| Rank on % award of 1 st + 2.1 | Institute (%1 st + 2.1) | Rank (% of all entry courses requiring <200 points)* | Rank (% of all entry courses requiring 300+ points) | Rank (mean of minimum entry points across all entry courses) |
|--|-------------------------------------|--|---|---|
| 1 | Tallaght (56.7%) | 4 | 6 | 5 |
| 2 | GMIT (55.8%) | 5 | 5 | 5 |
| 3 | Bl'stown (55.1%) | 1 | 1 | 2 |
| 4 | Sligo (47.4%) | 7 | 7 | 7 |
| 5 | Cork (46.8%) | 2 | 2 | 1 |
| 6 | Carlow (46.2%) | 8 | 10 | 8 |
| 7 | W'ford (42.3%) | 1 | 3 | 3 |
| 8 | Limerick (38.9%) | 3 | 4 | 4 |
| 9 | L'kenney (37%) | 11 | 11 | 10 |
| 10 | Tralee (34.1%) | 6 | 8 | 6 |
| 11 | Athlone (33.3%) | 10 | 12 | 11 |
| 12 | Dundalk (32.8%) | 9 | 9 | 9 |

As with Firsts, however, the rank order across the Institutes for rates of combined upper grades awarded and the rank orders based on the minimum points' profile of the same students at entry to their courses do not match at all well. As evident in Table 29 above, the two highest ranking Institutes on the award of Firsts and 2.1 degrees, Tallaght and GMIT, have minimum points' profiles below Blanchardstown, Cork, Waterford and Limerick. Sligo, with a rank of 7 on each of the three points' measures ranks at number 4 for the award of higher grades, above Cork, Waterford and Limerick all with ranks ranging from 1-4 on the points measures. Tralee which has points' measure ranks of 6, 6 and 8, ranks only in place 10 on the award of higher grades, six places below Sligo with the latter awarding 39% more higher grades.

While the overall rank order correlations between minimum points' measures and rate of higher grades awarded at Level 8 was considerably higher for the 2003-2004 graduates than for those of 2007-2008, nevertheless marked discrepancies in the match of ranks on an individual Institute basis were clearly in evidence. Despite markedly inferior points' profiles some Institutes had much higher rates of upper grades at Level 8.

3.2.3.4 Rate of Throughput to Level 8 as a Mediator between Points and Grades at Level 8.

As pointed out above, Level 8 (Honours Degree) graduates in each IOT are made up of a mix of students from *ab initio* Level 8 courses and students who

entered at Level 6 (Higher Certificate) or 7 (Ordinary Degree) and have progressed to Level 8. While it is possible to compare Institutes directly on their minimum points for *ab initio* Level 8 courses to find if some are admitting weaker students than others, such a comparison fails to capture information on the calibre of students progressing from Levels 6 and 7. At each Institute only a proportion of Level 6 students progress to Level 7 and only a proportion of Level 7 students progress to Level 8. Differences in how selective Institutes are in enabling students to progress should have a bearing on differences in the quality of their Level 8 students. The overall extent of throughput to Level 8 at an Institute, expressed as the percentage Level 8 graduates constitute of the total student entry figures (Levels 6,7 and 8) four years earlier, when compared with the Institute's course points' profile, should act as an indicator of the degree to which the Institute allows weaker students through.

If an Institute has, by comparison with another, a relatively weak points' profile (e.g. significantly fewer courses requiring 300+ points) and yet has a higher throughput to Level 8, it is suggestive that weaker students are gaining access to Honours Degree courses at that Institute. This may be due to lower points' requirements for *ab initio* Level 8 courses or to a higher proportion of students on lower points' Level 6 and 7 courses being allowed to progress to Honours Degree courses or, indeed, to some combination of the two factors. Such a high progression rate might then be expected to be followed by a lower rate of award of Firsts and 2.1s on graduation at Level 8. Of course, if the lack of selectivity takes the form of lower standards leading to inflated grades at Level 6 and 7, then inflated grades at Level 8 might be expected to follow. As against that, an Institute with a lower points' profile may produce a higher rate of First Class and 2.1 graduates than its points' profile would have predicted by virtue of greater selectivity at entry to Level 8.

An indication of differences among Institutes in this respect may be derived from a comparison of the 2002 Level 6, 7 and 8 entry numbers with the number of Level 8 graduates four years later in 2006. The unique advantage of using this cohort of students is the availability of the numbers being admitted on each course for 2002, thus enabling the precise proportion of students being admitted on various points' courses to be calculated.

For the purposes of this analysis, so as not to overly complicate the process, the percentage of students admitted in 2002 on 300+ points' courses is used as the sole indicator of academic ability among each Institute's entrants. Table 30 below lists the figures on student entrants and throughput for all 13 Institutes of Technology.

TABLE 30: NUMBERS GRADUATING AT LEVEL 8 IN 2006 AS A PROPORTION OF TOTAL CAO LISTED PLACES ON ALL LEVEL 6, 7 AND 8 ENTRY COURSES IN 2002

| Institute | Total Places in 2002* | Number of Level 8 Graduates in 2006 | Level 8 Graduates in 2006 as % of 2002 places | % Entrants in 2002 on 300+ points courses |
|-----------------|-----------------------|-------------------------------------|---|---|
| Waterford | 1923 | 1203 | 62.6 | 42.3 |
| Athlone | 1069 | 601 | 56.2 | 15.1 |
| Tallaght | 857 | 475 | 55.4 | 5.3 |
| Letterkenny | 666 | 357 | 53.6 | 6.8 |
| Sligo | 1201 | 621 | 51.7 | 25.9 |
| Limerick | 1152 | 594 | 51.6 | 40.0 |
| Dundalk | 977 | 468 | 47.9 | 5.4 |
| Cork | 2018 | 964 | 47.8 | 57.9 |
| Tralee | 701 | 335 | 47.8 | 9.6 |
| GMIT | 1886 | 781 | 41.4 | 36.5 |
| Dun Laoghaire** | 460 | 158 | 34.3 | |
| Carlow | 958 | 323 | 33.7 | 7.8 |
| Blanchardstown | 379 | 115 | 30.3 | 0 |
| Total | 14247 | 6995 | 49.1 | |

* Figures based on all places offered through the CAO whether by standard points or non-standard entry

** Too high a proportion of courses using non-standard points to include in this analysis

It is evident from Table 30 that Tralee, Dundalk, Limerick, Cork, Sligo and Letterkenny are all relatively close to the average (49.1%) in terms of Level 8 graduates expressed as the percentage of all students entering four years earlier. Their percentages ranged from 47.8% – 53.6%. Three Institutes, Tallaght (55.4%), Athlone (56.2%) and Waterford (62.6%) each had a clearly above average throughput to Level 8, while four others, Blanchardstown (30.3%), Carlow (33.7%), DunLaoghaire (34.3%) and GMIT (41.4%) had well below average throughputs.

Based on the proportion of students entering on courses requiring 300 or more points (5th column, Table 30 above), higher throughputs would be expected from Cork, Waterford, Limerick, GMIT and Sligo in that order with, even within that group of Institutes, over twice the throughput expected at Cork compared with Sligo. Lower throughputs would be expected from Athlone, Tralee, Carlow, Letterkenny, Dundalk, Tallaght and Blanchardstown.

It is immediately evident from Table 30 above that the proportion of higher points' students entering an Institute is a very poor predictor of its rate of throughput to Level 8. Athlone, Tallaght and Letterkenny rank 2, 3 and 4 on throughput to Level 8, above Cork, Limerick, Sligo and GMIT, Institutes with far higher proportions of students entering on 300+ points' courses. Cork, for example, has over 10 times Tallaght's rate of students entering on 300+ points' courses and over 8 times the rate of Letterkenny. GMIT, ranking in tenth place for throughput to Level 8, has almost 7 times Tallaght's rate of students on 300+ points' courses and over 5 times that of Letterkenny. Sligo, with less than half the proportion on 300+ points' courses of that at Cork, has, nonetheless, a higher

rate of throughput to Level 8. GMIT has only 1.2 times the rate of throughput of that at Carlow despite having 4.7 times the proportion of students entering on 300+ points' courses.

Not surprisingly, a test of the correlation between the rates of throughput to Level 8 and the percentage of students entering on 300+ points courses proves non-significant even on a one tailed test ($r=.315$, $N=12$, $p=.319$). DunLaoghaire was not included in the test because of its high proportion of students entering on courses with non-standard points' computations.

The absence of any discernible pattern whereby a better points' profile at an Institute predicts the rate of Level 8 throughput and subsequent graduation strongly suggests that widely differing educational standards prevail across the different Institutes. The evidence based on the 2002 entry figures is that in some Institutes, despite a much lower proportion of students with high points, the chances of graduating with a Level 8 degree are as high as or higher than at other Institutes with much better points' profiles.

Points and throughput rates are two out of three factors that should logically correlate. The third is, of course, grade rates at graduation. As explained above, if similar assessment standards applied across Institutes at Level 8, it would be expected that those Institutes with poorer points' profiles, yet higher throughputs to Level 8 would award significantly lower rates of Firsts and 2.1s. This would follow from an academically weaker mix of students getting through to Level 8 courses failing, as one might expect, to obtain the better grades on graduation. Following this logic, Tallaght, Letterkenny and Athlone should have had much lower rates of Firsts and 2.1s at Level 8 in 2006 by comparison with Cork, Waterford and GMIT, as indeed should Dundalk, Tralee and Carlow. Sligo should have a much lower rate of higher grades than Cork or GMIT.

The actual rates of Firsts and 2.1s for 2006 at all 13 Institutes are listed in Table 31 below. Looking initially at the rate of Firsts, contrary to expectations based on points' figures, Tallaght and Letterkenny have higher rates than Waterford, almost identical to GMIT, and roughly 85% that of Cork. Athlone, which has, as expected, a much lower rate of Firsts than those of Cork, GMIT or Waterford, also has a much lower rate of Firsts than Tallaght, Letterkenny and Tralee despite having significantly more students than any of them entering on 300+ points courses and only a marginally higher throughput rate. Tralee has almost two and a half times more Firsts than Dundalk. They have virtually identical rates of throughput to Level 8. Both have a low proportion of students entering on 300+ points. While the proportion at Tralee is higher, the difference

of only 4.2 percentage points seems nowhere like sufficient to explain the dramatically higher rate of Firsts at Tralee.

TABLE 31: THROUGHPUT TO LEVEL 8, POINTS' PROFILE AND RATE OF HIGHER GRADES AWARDED AT LEVEL 8 BY INSTITUTE FOR 2002 ENTRANTS.

| Institute | Level 8 Graduates in 2006 as % of all 2002 Level 6, 7 and 8 places | % entrants in 2002 on 300+ points courses | Rate of 1 st awards in 2006 | Rate of 2.1 awards in 2006 | Rate of 1 st + 2.1 awards in 2006 |
|----------------|--|---|--|----------------------------|--|
| Waterford | 62.6 | 42.3 | 16.7 | 40.3 | 57.0 |
| Athlone | 56.2 | 15.1 | 8.0 | 30.6 | 38.6 |
| Tallaght | 55.4 | 5.3 | 18.7 | 23.2 | 41.9 |
| Letterkenny | 53.6 | 6.8 | 18.5 | 30.5 | 49.0 |
| Sligo | 51.7 | 25.9 | 18.4 | 37.4 | 55.8 |
| Limerick | 51.6 | 40.0 | 13.5 | 43.3 | 56.8 |
| Dundalk | 47.9 | 5.4 | 6.8 | 36.3 | 43.1 |
| Cork | 47.8 | 57.9 | 21.9 | 39.8 | 61.7 |
| Tralee | 47.8 | 9.6 | 16.1 | 21.8 | 37.9 |
| GMIT | 41.4 | 36.5 | 18.6 | 44.6 | 63.2 |
| Dun Laoghaire | 34.3 | | 20.9 | 31.7 | 52.6 |
| Carlow | 33.7 | 7.8 | 18.3 | 29.7 | 48.0 |
| Blanchardstown | 30.3 | 0 | 19.1 | 20.0 | 39.1 |

Rates of Firsts are simply not predictable through the proportion of students entering on higher points' courses, the rate of throughput to Level 8 or through a combination of those two factors. Most striking is the similarity on rates of Firsts across the majority of Institutes. Eight of the thirteen have rates between 18 and 22 despite ample evidence of very substantial differences in the academic calibre of their student cohorts going through to Level 8 courses whether directly through the CAO or indirectly from Level 6 and 7 courses.

Predictions on the basis of points and throughput rates hold up somewhat better for rates of combined Firsts and 2.1s. Tallaght, Letterkenny and Athlone have lower rates than Cork, GMIT or Waterford. The same is true of Dundalk, Tralee and Carlow. There are, however, obvious anomalies. Sligo has a rate of higher grade awards not far short of Cork despite a marginally higher throughput and less than half the proportion of its students on 300+ points' courses. Limerick has a very similar rate of higher grades to that of Sligo. The two Institutes have a virtually identical rate of throughput to Level 8 but 40% of Limerick students entered on higher points' courses as opposed to 26% at Sligo.

While, in the main, the patterns follow the expected direction for the combined Firsts and 2.1s, the extent of differences in the rate of higher grades is insufficient to reflect the very considerable difference in points' profiles across the Institutes. Blanchardstown, Carlow, Dundalk and Tralee all have fewer than

10% of students entering on 300+ points' courses in 2002. They have throughputs ranging from around 30% to close to 50% and rates of upper grades between 38% and 48%. The four highest awarders of the two combined upper grades were GMIT, Cork, Waterford and Limerick. They had rates of combined Firsts and 2.1s of between 57% and 63%. However, the four had on average approximately 44% of their students entering in 2002 on 300+ points' courses. Admittedly, they also had somewhat higher throughput rates, which ranged from 41% to 62%. The gap between the two groups of four institutes on throughput and grades, though not insubstantial in either case, does not seem sufficient to meet the expectations that arise from over seven times the proportion of students entering on 300+ points courses in the group comprising GMIT, Cork, Waterford and Limerick.

3.2.4 Change in Entry Points and Grade Increase

A further check on the extent to which points' profiles predict grade percentages across the Institutes was conducted. This was done by quantifying how much increases and decreases in rates of Firsts and 2.1s between the combined 2003 & 2004 and the combined 2007 & 2008 graduation cohorts were predicted by changes in the percentages of courses requiring more than 300 and less than 200 points and by changes in the mean minimum entry points.

Tables 32 and 33 below rank orders the Institutes in terms of increase and decrease in the percentage of Firsts and in Firsts combined with 2.1s from the 2003-2004 to the 2007-2008 graduation cohorts together with the data for the two periods on the three points' profile scores for the two cohorts.

Looking across Table 32 below, it is evident that Tralee, Sligo, Carlow, Athlone and Dundalk each showed appreciable improvements in their entry points' profiles over the period with Limerick and Letterkenny having minor improvements. Points went down to one extent or another at Cork, Waterford, GMIT, Tallaght and Blanchardstown.

Of the 9 Institutes that showed increased percentages of First Class awards, three – Cork, Waterford and GMIT – showed a declining entry points' profile. Limerick and Letterkenny, ranked 3 and 4 on absolute increase in Firsts and in both cases only very marginally behind the number 2 ranked Institute, had each only small improvements in course entry points. Athlone, with a much bigger improvement in points, demonstrated a far smaller increase in Firsts. Dundalk, though improving on all three measures of minimum points, showed a decline in Firsts.

TABLE 32: RANK ORDER OF INSTITUTES ON CHANGE IN RATE OF FIRSTS FOR LEVEL 8 GRADUATES BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED, TOGETHER WITH POINTS' PROFILES ON ENTRY FOR ALL LEVEL 6, 7 & 8 COURSES

| Rank | Institute | 1999 & 2000 Entry Groups | | | | 2003 & 2004 Entry Groups | | | |
|------|----------------|--------------------------|-------------------------------|--|------------------------------------|------------------------------------|--|------------------------------------|------------------------------------|
| | | Extra % 1st* | Extra % 1 st +2.1* | Mean of min points for all entry courses | % of courses requiring 300+ points | % of courses requiring <200 points | Mean of min points for all entry courses | % of courses requiring 300+ points | % of courses requiring <200 points |
| 1 | Tralee | 6.7 | 7.1 | 177 | 10.0 | 50 | 231 | 28.4 | 39.7 |
| 2 | Cork | 5.5 | 12.3 | 321 | 66.0 | 3.6 | 276 | 46.2 | 19.5 |
| 3 | Limerick | 5.4 | 19.8 | 257 | 33.3 | 26.2 | 262 | 41.5 | 22.6 |
| 4 | Letterkenny | 5.3 | 5.3 | 136 | 7.5 | 82.5 | 146 | 8.0 | 80.0 |
| 5 | Sligo | 4.5 | 7.3 | 167 | 11.9 | 57.6 | 209 | 17.9 | 50.0 |
| 6 | Carlow | 4.4 | 8.8 | 147 | 7.6 | 63.5 | 177 | 19.9 | 66.7 |
| 7 | Waterford | 3.8 | 15.2 | 289 | 53.0 | 0 | 279 | 45 | 0 |
| 8 | Athlone | 1.6 | 13.7 | 107 | 6.1 | 75.6 | 186 | 18.7 | 62.7 |
| 9 | GMIT | 1.5 | 4.1 | 232 | 29.4 | 34.6 | 199 | 25.4 | 52.0 |
| 10 | Dundalk | -2.7 | 14.4 | 145 | 9.6 | 65.3 | 168 | 10.8 | 56.8 |
| 11 | Tallaght | -11.3 | -21.1 | 232 | 29.2 | 29.2 | 210 | 7.7 | 42.2 |
| 12 | Blanchardstown | -13.7 | -18.6 | 306 | 70.0 | 0 | 252 | 11.1 | 0 |

* The 'extra' percentages listed are absolute not proportionate. They are obtained by subtracting the percentage for the 1999-2000 entry groups on their graduation in 2003-2004 from the percentage for the 2003-2004 entry groups on their graduation in 2007-2008

As illustrated in Table 33 below, ten of the 12 Institutes showed increases in the percentage of combined Firsts and 2.1 degrees. Of those ten, points declined at Cork, Waterford, and GMIT. Limerick, with the largest increase in higher grades showed only a relatively minor improvement in points. Tralee, with a much more significant improvement in points, evidenced an increase in higher grades of little more than a third of that shown at Limerick. Sligo, also with a proportionately bigger improvement in points than Limerick, had a far lower increase in higher grades.

Some Institutes did show changes in First and in combined First and 2.1 rates which matched changes in their points' profiles. Both Blanchardstown and Tallaght, for example, demonstrated a marked decline in the rate of higher grades awarded together with a marked decline in points. Overall, however, change in points' profiles acts, at best, as a weak predictor of change in rates of higher grades awarded across the 12 Institutes.

The failure of change in points' profiles to accurately predict change in grade percentages is in keeping with the more general failure of points' profiles to accurately predict grade rates across Institutes. Institutes would seem to operate their own working definitions of what constitutes a First or a Distinction, a 2.1 or a Merit 1, definitions which vary considerably from one Institute to the next.

TABLE 33: RANK ORDER OF INSTITUTES ON CHANGE IN RATE OF COMBINED FIRST CLASS AND 2.1 AWARDS FOR LEVEL 8 GRADUATES BETWEEN 2003 & 2004 COMBINED AND 2007 & 2008 COMBINED, TOGETHER WITH POINTS' PROFILES ON ENTRY FOR ALL LEVEL 6, 7 & 8 COURSES

| Rank | Institute | Extra % 1 st +2.1* | 1999 & 2000 Entry Groups | | | 2003 & 2004 Entry Groups | | |
|------|----------------|----------------------------------|--|--|--|--|--|--|
| | | | Mean of minimum points for all courses | % of courses requiring 300+ points | % of courses requiring <200 points | Mean of minimum points for all courses | % of courses requiring 300+ points | % of courses requiring <200 points |
| 1 | Limerick | 19.8 | 257 | 33.3 | 26.2 | 262 | 41.5 | 22.6 |
| 2 | Waterford | 15.2 | 289 | 53.0 | 0 | 279 | 45.0 | 0 |
| 3 | Dundalk | 14.4 | 145 | 9.6 | 65.3 | 168 | 10.8 | 56.8 |
| 4 | Athlone | 13.7 | 107 | 6.1 | 75.6 | 186 | 18.7 | 62.7 |
| 5 | Cork | 12.3 | 321 | 66.0 | 3.6 | 276 | 46.2 | 19.5 |
| 6 | Carlow | 8.8 | 147 | 7.6 | 63.5 | 177 | 19.9 | 66.7 |
| 7 | Sligo | 7.3 | 167 | 11.9 | 57.6 | 209 | 17.9 | 50.0 |
| 8 | Tralee | 7.1 | 177 | 10.0 | 50.0 | 231 | 28.4 | 39.7 |
| 9 | Letterkenny | 5.3 | 136 | 7.5 | 82.5 | 146 | 8.0 | 80.0 |
| 10 | GMIT | 4.1 | 232 | 29.4 | 34.6 | 199 | 25.4 | 52.0 |
| 11 | Blanchardstown | -18.6 | 306 | 70.0 | 0 | 252 | 11.1 | 0 |
| 12 | Tallaght | -21.1 | 232 | 29.2 | 29.2 | 210 | 7.7 | 42.2 |

* The 'extra' percentages listed are absolute not proportionate. They are obtained by subtracting the percentage for the 1999 & 2000 entry groups on their graduation in 2003 & 2004 from the percentage for the 2003 & 2004 entry groups on their graduation in 2007 & 2008

It is, of course, possible that within Institutes considerable standards' variation applies among disciplines, individual courses, individual subjects and right down to the level of individual examiners. While the data available cannot cast light on course, subject and examiner differences in standards, it is possible to test for evidence of disparities within Institutes among disciplines. This is dealt with in the next section.

3.2.5 Variance in Grading across Disciplines.

Table 34 below lists the proportions of awards accounted for by the highest grade across the 13 IOTs at Levels 6 (Distinction), 7 (Distinction) and 8 (First Class) by discipline for 2007 & 2008 combined.

TABLE 34: COMBINED INSTITUTES - RATE OF HIGHEST GRADE AVERAGED OVER 2007 AND 2008 FOR EACH DISCIPLINE

| Qualification and Grade | % of graduates in Business | % of graduates in Engineering | % of graduates in Humanities | % of graduates in Science & Technology |
|--|----------------------------|-------------------------------|------------------------------|--|
| Level 8 - Firsts | 13.1 | 18.5 | 14.9 | 20.8 |
| Level 7- Distinctions | 14.8 | 22.2 | 11.2 | 22.4 |
| Level 6- Distinctions | 16.5 | 16.7 | 13.1 | 31.4 |
| Mean rate of highest grade in each discipline | 14.8 | 19.1 | 13.1 | 24.9 |

A cursory examination of Table 34 reveals immediate evidence of grading differences associated with discipline. Clearly, the highest rate of top grades is

awarded in Science and Technology, an intermediate rate in Engineering and lower rates in Business and Humanities. The final row in this table lists the averages of the three discipline rates in each case but without any account taken of differences in the numbers being awarded Level 6, 7 or 8 qualifications.

This pattern of top grades may represent genuine discipline variations replicated across each of the IOTs or may be a product of wide variations in discipline rates between IOTs. In an effort to resolve this question, Level 8 was chosen for an examination of the discipline rates within the individual institutes.

Table 35 below lists the rate of First Class awards for each discipline in each Institute for the combined years of 2007 and 2008, together with the percentages of entry courses requiring 300+ points in 2003 and 2004, the years those Level 8 graduates would have commenced their courses, whether at Level 6, 7 or 8. In 6 of the 11 Institutes analysed, Science/Technology has the highest rate, but not in Athlone, GMIT, Tralee, Carlow or Tallaght. In Athlone, GMIT, Tralee and Carlow, Engineering has the highest rate. In Tallaght, Humanities is in the top position.

TABLE 35: RATE OF FIRSTS AT LEVEL 8 AVERAGED OVER 2007 & 2008 AND % OF LEVEL 6, 7 AND 8 COURSES REQUIRING 300+ POINTS IN 2003 & 2004 COMBINED, BY DISCIPLINE AND INSTITUTE *

| Institute | Business | | Engineering | | Humanities | | Sc. & Tech | |
|--------------------|-------------|------------------------------------|-------------|------------------------------------|-------------|------------------------------------|-------------|------------------------------------|
| | % Firsts | % of courses requiring 300+ points | % Firsts | % of courses requiring 300+ points | % Firsts | % of courses requiring 300+ points | % Firsts | % of courses requiring 300+ points |
| Athlone | 11.1 | 8.7 | 18.9 | 0.0 | 7.9 | 75.0 | 10.8 | 35.3 |
| Cork | 15.4 | 69.2 | 20.9 | 50.0 | 17.9 | 66.7 | 30.0 | 24.0 |
| GMIT | 14.5 | 31.8 | 31.0 | 31.3 | 21.1 | 22.2 | 16.3 | 17.2 |
| Tralee | 12.3 | 20.0 | 18.8 | 0.0 | 22.9 | 100.0 | 21.5 | 45.0 |
| Waterford** | 16.0 | 51.7 | 15.7 | 44.4 | 12.8 | 100.0 | 19.6 | 34.5 |
| Carlow*** | 19.3 | 9.1 | 23.1 | 12.5 | | 100.0 | 21.6 | 14.3 |
| Sligo | 13.2 | 16.7 | 19.7 | 20.0 | 9.7 | 100.0 | 28.4 | 10.5 |
| Dundalk | 5.9 | 8.7 | 6.1 | 0.0 | 9.2 | 20.0 | 10.9 | 12.9 |
| Limerick | 9.7 | 75.0 | 11.1 | 30.0 | 17.4 | 100.0 | 21.3 | 33.3 |
| Tallaght | 6.0 | 0.0 | 20.1 | 0.0 | 27.8 | 0.0 | 15.2 | 25.0 |
| Blanchardstown | 14.7 | 0.0 | 16.7 | 0.0 | 13.8 | 100.0 | 36.6 | 0.0 |
| Average**** | 12.6 | 26.4 | 18.4 | 17.1 | 16.1 | 71.3 | 21.1 | 22.9 |

* Letterkenny and Dun Laoghaire not included because Letterkenny failed to disclose grades within disciplines while Dun Laoghaire had too high a proportion of courses with non-standard entry points to enable analysis of points' profiles.

** Waterford did not release the 2008 figures; % Firsts is based on 2007 figures only.

*** Carlow had no Level 8 Humanities graduates in 2007-2008; the Humanities entry courses from which the proportion of 300+ points' courses is derived were Level 6/7.

**** The average rate of Firsts differ somewhat from figures quoted in Table 34 above because the figures in Table 34 are computed from the aggregate of all Level 8 awards across the Institutes, including those from Dun Laoghaire and take account of the differing number of graduates across the Institutes. The average % Firsts in this Table are in each case the mean of the individual Institute figures and take no account of the differing numbers on which they are based.

Within Institutes there are very wide variations in the rate of Firsts across the four disciplines. Only in Carlow was there a relatively even spread. In

all the others, the highest rate was at least 1.5 times the lowest with the gap much wider in most cases. In Dun Laoghaire and Tallaght, the difference amounted to a factor of at least 4. In Blanchardstown, Limerick, Sligo, Athlone and GMIT the difference exceeded a factor of 2 and came close to 2 in Dundalk, Cork and Tralee. Waterford exceeded 1.5.

Based on the striking differences in rates of Firsts, it might be expected that an academically much stronger student opts to pursue Science/Technology courses than ones in Business or Humanities in most of the IOTs. There are exceptions to this rule. In Tallaght and Tralee, the highest rate of Firsts occurs in Humanities and the lowest in Business. Nevertheless, given that in aggregate, the highest rate of Firsts is in Science and Technology (20.8%) and the lowest in Business (13.1%), it was hypothesised that the average proportion of courses across the Institutes requiring 300+ points would be significantly higher in the former than the latter discipline. As evident in Table 35, this is not the case. In 5 out of the 11 Institutes that could be analysed, the proportion of courses requiring 300+ points was higher in Business and the average percentage of 300+ points courses across the Institutes was higher for Business (26.4%) than Science and Technology (22.9%). This is despite the fact that only in one Institute was the rate of Firsts higher in Business than in Science and Technology, and then only marginally so. In contrast, 6 of the 10 Institutes with higher rates of Firsts in Science and Technology have rates that are close to or in excess of double those in Business.

The rate of Firsts in Engineering also exceeds those in Business in all but one Institute. Again, the proportion of courses requiring 300+ points favours Business in the majority of cases, with an average proportion of 26.4% in Business as against 17.1% in Engineering.

By far the highest rate of courses requiring 300+ points occurs in the Humanities. Seven Institutes had no courses in the Humanities with points below 300, while two others had a substantial majority of their Humanities courses at minimum points' levels at or exceeding 300. Despite this profile of higher points, the average rate of Firsts in the Humanities falls short on average of both Science/Technology and Engineering. Some caution is required, however in interpreting Humanities figures because the number of such courses at each Institute tends to be small. For 2003 & 2004 combined, the number of individual course intakes ranged from 1-9 across the Institutes with an average of 4.3. Eight Institutes had four or less intakes in 2003 and 2004 combined.

As a final test of the link between points and grades, the correlation between the rate of Firsts in each discipline at each Institute and the percentage of courses requiring 300+ points for each discipline at each Institute was computed. In all, 43 pairs of figures were included, as listed in Table 35 above. A Pearson $r = -.165$, $P = .146$, was obtained, demonstrating that no statistically significant link exists between the two sets of figures.

Based on the 2007 & 2008 Level 8 graduation and the 2002 & 2003 entry figures, it is clear that across the Institutes, the variance in the rate of Firsts identified across the four disciplines is not predicted by the proportion of courses in those disciplines that require 300+ points for entry. With the sole exception of Athlone, there is a consistent trend across the Institutes of more Firsts being awarded in Science and Technology and fewer Firsts in Business. There is no evidence based on CAO points that more capable students choose to study the former and weaker students the latter. The opposite is more often the case. At Cork, GMIT, Waterford, Sligo and Limerick a very substantially higher proportion of Business courses required 300 or more points. At Blanchardstown, neither discipline had any course that required 300 points or above. At each of Tralee, Carlow, Dundalk and Tallaght more Science and Technology courses required entry points of at least 300. Moreover, as evident in Table 35 above, the differences on average in this respect between the two disciplines for those four Institutes was not as great as for the five where the rate of 300+ point courses was higher in Business. At Athlone, where there was a marginally higher rate of Firsts in Business courses, over four times as many Science and Technology courses required 300+ points than was the case in Business.

The excess of Firsts in Science and Technology over Business has characterised the two disciplines at Honours Degree level over the complete period of 1994-2008. In 1994 the rate of Firsts in Science and Technology was 11.7% as compared with 2.7% in Business. The average rate across the fifteen years was 15.7% in Science/Technology and 9.5% in Business. The average rates of Firsts in Engineering and the Humanities were 15.9% and 14% respectively over the same 15 year period. Over the longer period then, Science/Technology and Engineering have similar rates of Firsts with a somewhat lower rate in the Humanities and a substantially lower rate in Business.

The pattern of a greater proportion of higher grades in Science/Technology and Engineering is true also at Level 6 and Level 7. At Level 6 the average annual rates of Distinctions in Science/Technology and Engineering between 1994 & 2008 are 20.8% and 18% respectively as compared with 13.9% in the Humanities and 12.6% in Business. At Level 7 the comparable rates are 19% for both Science/Technology and Engineering, 11% for the Humanities and 13% for Business.

There is nothing to suggest that student ability accounts for the different rates of Firsts across Honours Degrees in different disciplines. It is difficult to escape the conclusion that substantially different academic standards characterise different disciplines. This finding raises the possibility that differences in the rate of higher grades awarded across the Institutes might be accounted for by differences in the distribution of graduates across the four disciplines at the different Institutes. This would be indicated if the Institutes awarding a greater proportion of higher grades were also the ones with a higher proportion of Science/Technology and Engineering graduates. The findings on this will be described in the next section.

3.2.6 An Institute or a Discipline Effect?

The possibility that Institute differences in grading may be accounted for by variance in the percentage of graduates across the four disciplines was tested by a comparison of the rate of First Class honours at Level 8 with the proportion of graduates across the disciplines for 2003 & 2004 combined and for 2007 & 2008 combined. Tables 36 and 37 below list the relevant figures.

In Table 36, the Institutes are rank ordered by overall rate of Firsts awarded. Since, throughout the IOT sector, Science/Technology and Engineering are associated with higher rates of Firsts, the expectation is that the rank order for the proportion of Science/Technology-Engineering graduates would show a reasonable match with the ranks on Firsts if, indeed, discipline variance accounts for the Institute variance in Firsts. By the same token, the reverse rank order should prevail for the proportion of graduates accounted for at each Institute by Business and Humanities.

TABLE 36: PERCENTAGE FIRSTS AND PERCENTAGE OF LEVEL 8 GRADUATES IN EACH DISCIPLINE – 2007 & 2008 COMBINED

| Institute* | %Firsts | %Sc | %Eng | Percentage of Graduates in each Discipline | | | | | |
|-----------------------|---------|------|------|--|--------------|------|------|-----------|----------------|
| | | | | % Sc +Eng | Rank% Sc+Eng | %Bus | %Hum | %Bus+ Hum | Rank % Bus+Hum |
| Cork | 20.4 | 25.1 | 16.3 | 41.5 | 6 | 39.2 | 19.3 | 58.5 | 7 |
| Carlow | 20.0 | 17.0 | 13.0 | 29.9 | 9 | 70.1 | 0.0 | 70.1 | 4 |
| DunLaogahire | 18.8 | 19.3 | 0.0 | 19.3 | 12 | 25.1 | 55.6 | 80.7 | 1 |
| Tralee | 18.6 | 52.5 | 6.3 | 58.8 | 1 | 33.7 | 7.5 | 41.2 | 12 |
| GMIT | 18.3 | 25.5 | 15.7 | 41.2 | 7 | 44.0 | 14.8 | 58.8 | 6 |
| Sligo | 17.9 | 24.8 | 22.4 | 47.3 | 2 | 38.1 | 14.6 | 52.7 | 11 |
| Waterford** | 16.4 | 34.8 | 11.4 | 46.2 | 3 | 29.9 | 23.9 | 53.8 | 10 |
| Blanchardstown | 16.1 | 35.0 | 4.4 | 39.4 | 8 | 60.6 | 0.0 | 60.6 | 5 |
| Limerick | 15.2 | 19.2 | 25.6 | 44.7 | 4 | 16.4 | 38.9 | 55.3 | 9 |
| Tallaght | 12.1 | 15.4 | 11.4 | 26.8 | 11 | 60.1 | 13.2 | 73.2 | 2 |
| Athlone | 10.7 | 18.0 | 10.2 | 28.1 | 10 | 36.4 | 35.4 | 71.9 | 3 |
| Dundalk | 8.1 | 31.9 | 12.5 | 44.4 | 5 | 35.4 | 20.2 | 55.6 | 8 |

*Letterkenny could not be included as it did not provide a breakdown of grades across disciplines for 2005-2008

** Waterford figures are based on those for 2007 alone as Waterford did not respond to request for figures for 2008.

An examination of the rank columns in Table 36 above shows that the rank order is not as expected. For the percentage of Level 8 graduates accounted for by Science/Technology-Engineering, three of the six top awarders of Firsts have ranks in the bottom six. The average rank on percentage of graduates accounted for by the combination of Science/Technology and Engineering among the top six awarders of Firsts is 6.2 as compared with 6.8 for the bottom six awarders with the exact reverse situation (as mathematically

must happen) applying to the ranks on the combined Business and Humanities. The average proportion of Science/Technology-Engineering graduates accounted for among the top six awarders of First Class degrees is 39.7% as against 38.3% for the six lowest awarders. There is, therefore, a slight tendency in the expected direction, The existence of, on average, an extra one to two graduates per hundred in Science /Technology - Engineering among those of the top six awarders of First Class honours degrees goes little way to explain the extra six First Class degrees per hundred candidates they awarded on average by comparison with the lower six awarders. The average rate of Firsts among the top six awarders was 19% in 2007 & 2008 combined as compared with 13.1% for the bottom six.

On the basis of the 2007 & 2008 figures it can be concluded that while variance across disciplines contributes in the expected direction to variance in Institutes in their rate of First Class awards, the former is only capable of explaining a small proportion of the latter. Other unknown factors within Institutes account for much more of the differences among them in the rates of Firsts they award.

To verify the reliability of the 2007 & 2008 figures an identical analysis was conducted using the combined 2003 & 2004 results. Table 37 below summarises the relevant data.

An examination of Table 37 reveals that in 2003 & 2004, the link between the rate of overall Firsts at a given Institute and the proportion of its graduates accounted for by Science/Technology and Engineering is even weaker than for 2007 & 2008. This time there are figures for 13 Institutes which precludes an even split of top and bottom awarders of Firsts. Irrespective, whichever way the split is made, the result is the same. Four of the top six or five of the top seven First Class awarders are not ranked in the top group for the proportion of graduates accounted for by Science/Technology and Engineering. By assigning the top 7 Institutes to the top category and the remaining six to the bottom, the average proportion of graduates in Science/Technology and Engineering is 35% for the top awarders and 40.3% for the bottom awarders. If the split is taken the other way and the top six are assigned to the top category with the remaining seven to the bottom, the comparable figures are 36.7% and 38.1% Either way, a lower proportion of the graduates at the Institutes awarding more Firsts are in the disciplines associated with more Firsts. The difference on Firsts between the two groups is large, with an average of 19.2% among the top 7 compared with 11% among the bottom 7. Using the alternative split, the top 6 averaged 20.2%, the bottom six 11.3%.

TABLE 37: PERCENTAGE FIRSTS AND PERCENTAGE OF LEVEL 8 GRADUATES IN EACH DISCIPLINE – 2004 & 2005 COMBINED

| Institute* | Percentage of Graduates in each Discipline | | | | | | | | |
|----------------|--|------|------|--------------|-----------------|------|------|--------------|-------------------|
| | %Firsts | %Sc | %Eng | % Sc +Eng | Rank% Sc+Eng | %Bus | %Hum | %Bus+ Hum | Rank % Bus+Hum |
| Blanchardstown | 29.8 | 35.0 | 4.4 | 39.4 | 8 | 60.6 | 0.0 | 60.6 | 6 |
| Tallaght | 23.4 | 18.0 | 11.3 | 29.3 | 10 | 60.4 | 10.3 | 70.7 | 4 |
| DunLaoghaire | 20.8 | 19.3 | 0.0 | 19.3 | 13 | 25.1 | 55.6 | 80.7 | 1 |
| GMIT | 16.8 | 17.7 | 17.5 | 35.2 | 9 | 49.5 | 15.3 | 64.8 | 5 |
| Carlow | 15.6 | 46.5 | 1.1 | 47.6 | 2 | 43.2 | 9.3 | 52.4 | 12 |
| Cork | 14.9 | 28.9 | 20.3 | 49.2 | 1 | 35.9 | 14.9 | 50.8 | 13 |
| Sligo | 13.4 | 16.0 | 8.9 | 24.8 | 12 | 63.1 | 12.0 | 75.2 | 2 |
| Waterford | 12.6 | 30.3 | 12.9 | 43.2 | 5 | 36.1 | 20.8 | 56.8 | 9 |
| Tralee | 11.9 | 36.8 | 5.9 | 42.7 | 6 | 55.1 | 2.2 | 57.3 | 8 |
| Letterkenny | 11.6 | 35.8 | 7.4 | 43.2 | 4 | 46.5 | 10.3 | 56.8 | 10 |
| Dundalk | 10.8 | 30.1 | 10.3 | 40.4 | 7 | 49.4 | 10.1 | 59.6 | 7 |
| Limerick | 9.8 | 21.0 | 25.8 | 46.8 | 3 | 35.3 | 17.9 | 53.2 | 11 |
| Athlone | 9.1 | 13.6 | 12.0 | 25.5 | 11 | 56.6 | 17.9 | 74.5 | 3 |

The 2003 & 2004 findings, even more strongly than those for 2007 & 2008, indicate that discipline variance does not account for the grading variance identified across the Institutes.

3.2.7 Is Institute Size a Mediating Factor for Higher Grades?

3.2.7.1 Why Consider Institute Size?

The 13 Institutes vary considerably in history, circumstances and development. Some Institutes such as Cork, Limerick and GMIT are in more populous provincial cities while others are in smaller towns such as Carlow, Tralee, Letterkenny and Dundalk. A further group of Institutes are located in the greater Dublin conurbation. The hinterlands of the different Institutes vary greatly, therefore, in population density and in the accessibility of alternative third level educational provision. Some Institutes emerged much later than others and some, such as Limerick, comprise much older educational institutions which were later amalgamated to form an Institute of Technology.

An important outcome of history and circumstances is size. Using the 2002 CAO entrance figures as illustrative (see Table 38 below), Cork, with the highest number, had 5 times as many course places as Blanchardstown, which had the fewest. Six Institutes had over 1000 course places, averaging 1542, while the other seven, with between 379 and 977 course places, averaged 714. This division is used below to compare ‘Larger’ and ‘Smaller’ Institutes, an analysis which was pursued due to both empirical and theoretical considerations. Theoretically, O’Grady and Quinn (2007) argued that a strong impetus for grade inflation came

from the desire of third level educational Institutes to grow, with standards being lowered to increase student numbers in the face of the inevitably limited supply of academic capability. Smaller Institutes, with a more limited population of potential students due to geographic factors and competition from more established providers, would logically be more prone to this trend. Empirically, an initial comparison of the 2002 entrance points, the rate of throughput to Level 8 and the Level 8 grades in 2006 across the Institutes points towards size as a determining factor for academic standards.

The 13 Institutes were, therefore, divided into a 'larger' Institute and a 'smaller' Institute group on the basis of a cut-off of 1000 in the number of undergraduate student places listed in the 2002 CAO figures. The two groups were subjected to a series of comparisons in an effort to quantify the connection between Institute size and factors suggestive of academic standards and grade inflation. The comparisons involved the percentages of higher grades at Level 8 in 2006 compared with Level 6, 7 and 8 course points' profiles in 2002; percentages of higher grades at Level 8 in 2007 & 2008 compared with Level 6,7 and 8 course points' profiles in 2003 & 2004; percentages of higher grades at Level 6 in 2004 and Level 7 in 2005 compared with Level 6 and 7 course points' profiles in 2002; percentages of higher grades at Level 6 averaged over 2007 & 2008 compared with Level 6/7 course points' profiles for 2005 & 2006 and, finally, percentages of higher grades at Level 7 averaged over 2007 & 2008 compared with Level 6/7 course points' profiles for 2004 & 2005

3.2.7.2 *Comparison of 'Larger' and 'Smaller' Institutes: Level 8 Grades*

Table 38 below summarises the student numbers, points' profiles, throughput rates and grade percentages in the two groups for Level 8 graduates in 2006. As explained above, the Level 8 graduate cohort in 2006 are of particular value for comparison in that the number of places on each course was published by the CAO for 2002, the year the 2006 cohort would have entered college .

Comparing the smaller with the larger Institutes, the most striking difference between the two is that the larger have proportionately six times as many students entering on 300+ points' courses. This suggests a much stronger academic calibre of student on average than those entering the smaller Institutes. Despite this, the smaller Institutes have a higher average rate of First Class awards. While the smaller Institutes have a lower rate of 2.1s, the difference between 28% and 39% hardly seems sufficient in the face of 6 times as many students entering on courses requiring 300+ points at the larger Institutes. It is striking, too, that the difference in throughput to Level 8 between the two

groups of Institutes, 52% at the larger versus 45% at the smaller, though in the direction expected, is not near as large as the points' profiles would predict.

TABLE 38: COMPARISON OF LARGER (1000+ LEVEL 6, 7 AND 8 CAO PLACES IN 2002) WITH SMALLER (<1000 CAO PLACES IN 2002) ON THROUGHPUT TO LEVEL 8, CAO POINTS AND % OF HIGHER GRADES FOR 2006 LEVEL 8 GRADUATES ENTERING IN 2002

| Institute | Places '02 | Level 8 grads '06 | Throughput** % to Level 8 | % of students entering courses requiring 300+ points | % Firsts at Level 8 in 2006 | % 2.1 at Level 8 in 2006 | % 1 st + 2.1 in 2006 |
|----------------|-------------|-------------------|---------------------------|--|-----------------------------|--------------------------|---------------------------------|
| LARGER | | | | | | | |
| Cork | 2018 | 964 | 47.8 | 57.9 | 21.9 | 39.8 | 61.7 |
| Waterford | 1923 | 1203 | 62.6 | 42.3 | 16.7 | 40.3 | 57 |
| GMIT | 1886 | 781 | 41.4 | 36.5 | 18.6 | 44.6 | 63.2 |
| Sligo | 1201 | 621 | 51.7 | 25.9 | 18.4 | 37.4 | 55.8 |
| Limerick | 1152 | 594 | 51.6 | 40 | 13.5 | 43.3 | 56.8 |
| Athlone | 1069 | 601 | 56.2 | 15.1 | 8 | 30.6 | 38.6 |
| Average | 1542 | 794 | 51.5 | 36.3 | 16 | 39 | 56 |
| SMALLER | | | | | | | |
| Dundalk | 977 | 468 | 47.9 | 5.4 | 6.8 | 36.3 | 43.1 |
| Carlow | 958 | 323 | 33.7 | 7.8 | 18.3 | 29.7 | 48 |
| Tallaght | 857 | 475 | 55.4 | 5.3 | 18.7 | 23.2 | 41.9 |
| Tralee | 701 | 335 | 47.8 | 9.6 | 16.1 | 21.8 | 37.9 |
| Letterkenny | 666 | 357 | 53.6 | 6.8 | 18.5 | 30.5 | 49 |
| Dun Laoghaire | 460 | 158 | 34.3 | | 20.9 | 31.7 | 52.6 |
| Blanchardstown | 379 | 115 | 30.3 | 0 | 19.1 | 20 | 39.1 |
| Average | 714 | 319 | 44.7 | 5.8* | 17 | 28 | 45 |

* Dun Laoghaire not included in average because of high proportion of courses with non-standard points

** Level 8 graduates in 2006 as a percentage of all level 6,7 and 8 entrants in 2002

In an effort to validate the above findings for Level 8 grades, a similar analysis was conducted using the combined 2007 & 2008 Level 8 graduate figures and the combined 2003 & 2004 CAO entrance figures. For this analysis the number of places on individual courses was not available so the proportion of courses at each Institute requiring 300+ points was used in place of the proportion of entrants on such courses. As explained in section 3.1.2.2 above, the two figures evidence extremely high correlations and, therefore, offer similar information.

Lacking the course entrance figures, it was not possible to include a consideration of throughput to Level 8. The same Institutes were assigned to the larger and smaller categories as in the previous analysis. The average number of Level 8 graduates in 2007 & 2008 fits this division precisely.

TABLE 39: COMPARISON OF 'SMALLER' AND 'LARGER' INSTITUTES ON POINTS' PROFILES ACROSS ALL LEVEL 6, 7 AND 8 COURSES FOR 2003 & 2004 COMBINED AND ON HIGHER GRADES AT LEVEL 8 FOR 2007 & 2008 COMBINED

| Institute | Number of Level 8 graduates (Avg. 2007-08) | % of courses requiring 300+ points (2003 & 2004) | % Firsts (2007 & 2008) | % 2.1 (2007 & 2008) |
|------------------|---|---|-----------------------------------|--------------------------------|
| LARGER | | | | |
| Waterford | 1175 | 45.0 | 16.4 | 41.1 |
| GMIT | 758 | 25.4 | 18.3 | 41.6 |
| Cork | 812 | 46.2 | 20.4 | 38.7 |
| Sligo | 584 | 17.9 | 17.9 | 36.8 |
| Limerick | 614 | 41.5 | 15.2 | 43.5 |
| Athlone | 537 | 18.7 | 10.7 | 36.3 |
| Average | 747 | 32 | 16.5 | 40 |
| SMALLER | | | | |
| Dundalk | 463 | 10.8 | 8.1 | 39.1 |
| Carlow | 339 | 19.9 | 20.0 | 35.0 |
| Tallaght | 368 | 7.7 | 12.1 | 24.5 |
| Tralee | 375 | 28.4 | 18.6 | 22.5 |
| Letterkenny | 306 | 8.0 | 16.9 | 25.4 |
| Dun Laoghaire | 290 | | 18.8 | 29.1 |
| Blanchardstown | 102 | 11.1 | 16.1 | 20.5 |
| Average | 320 | 14 | 15.8 | 28 |

As evident in Table 39 above, the findings are similar to those for the 2006 graduates. The larger Institutes have more than double the proportion of courses requiring 300+ points (32% vs. 14% on average), yet have only a marginally higher rate of Firsts. As in 2006, they do however have a more substantially higher rate of 2.1 awards. On the evidence available, the gap between the larger and smaller institutes in their respective profiles of higher points is not near as great as in 2006. However, the difference in points seems large by comparison with the difference in 2.1 awards: a ratio of 2.3:1 on percentage of courses with over 300 points versus a ratio of 1.4:1 on percentage of Honours Degrees gaining a 2.1 grade.

The findings of both analyses suggest a pattern of lower academic standards being maintained at smaller Institutes. This finding is consistent with the 'institutional growth' explanation for grade inflation offered by O'Grady and Quinn (2007). As an important explanation for grade inflation they proposed that the rush to expand higher educational institutions militated against academic standards due to the necessity to take in weaker students and allow them to progress through third level courses. A proliferation of Level 8 courses at all Institutes of Technology contributed to institutional growth but further depressed standards through a shortage of academically capable students.

It stands to reason that the larger Institutes with more students and a higher proportion of those with greater academic talent would feel less pressure

to erode standards. They would, therefore, have a sense of having enough capable students to make Level 8 courses viable whereas the smaller Institutes, seeking to match the larger in the provision of Level 8 courses, without the numbers or an adequate supply of talent, would have been forced to drop their standards. The effect would inevitably have been, as suggested by the analysis above, to allow weaker students to get higher grades. Otherwise, at the lower end of the marks spectrum large numbers of students allowed on to Level 8 courses would have to fail which would run counter to the institutional growth imperative. If the performance that merits a mark of 60% in Institute A obtains a mark of 70% in Institute B, then it allows for marks of 30% at Institute A to become 40% at Institute B. Such a difference in standards has a very large impact on the relative viability of Level 8 courses at the two Institutes. In one, a course will thrive – at least in so far as appearances go – while in the other it will wither away due to a lack of students with suitable ability. The seemingly infinite elasticity of grades is a gift to the institutional empire builder but a cancer for academic standards.

3.2.7.3 *Comparison of ‘Larger’ and ‘Smaller’ Institutes: Level 6 and 7 Grades*

While the points’ profiles for the Level 8 analysis described above included all undergraduate entrants (Levels 6, 7 and 8) through the CAO system, this analysis excludes *ab initio* Level 8 courses because none of those entrants appear at any time among Level 6 and 7 graduates. With that exclusion, the gap between the points’ profiles of the larger and smaller institutes for the 2002 entry cohort grows even wider. For Level 6 and 7 courses proportionately over 12 and a half times more students entered 300+ points courses in the larger Institutes (see Table 40 below). By comparison, as evident in Table 38 above, the larger Institutes had 6 times the overall student percentage of their smaller equivalents entering 300+ points’ courses when Level 8 entrants were also included.

The proportion of students at the smaller Institutes entering Level 6 and 7 courses with requirements for 300+ points is very minor at only 2.3% on average. This compares with a substantial 29% of students at the larger Institutes. At the other end of the points’ scale, twice as many students at the smaller Institutes, almost 6 out of every 10, enter courses with a points’ requirement below 200. Less than 3 out of every 10 enter on such low points’ courses at the larger Institutes.

TABLE 40: COMPARISON OF LARGER INSTITUTES (1000+ LEVEL 6, 7 AND 8 CAO PLACES IN 2002) WITH SMALLER INSTITUTES (<1000 CAO PLACES IN 2002) BASED ON 2004 LEVEL 6 GRADUATES AND 2005 LEVEL 7 GRADUATES ENTERING IN 2002

| Institute | CAO places in 2002 Levels 6&7 | % entering courses requiring < 200 points | % entering courses requiring 300+ points | % Dist. Level 6 2004 | % M1 Level 6 2004 | % M2 Level 6 2004 | % Dist. Level 7 2005 | % M1 Level 7 2005 | %M2 Level 7 2005 |
|----------------|-------------------------------|---|--|----------------------|-------------------|-------------------|----------------------|-------------------|------------------|
| LARGER | | | | | | | | | |
| Waterford | 1366 | 0 | 23.7 | 21.0 | 19.8 | 23.9 | 10.7 | 20.7 | 33.0 |
| GMIT | 1562 | 47.0 | 35.0 | 15.1 | 18.1 | 27.7 | 15.9 | 22.0 | 33.6 |
| Cork | 1488 | 11.4 | 51.5 | 19.1 | 20.8 | 30.3 | 21.0 | 25.7 | 30.2 |
| Sligo | 1051 | 33.9 | 24.3 | 15.0 | 17.7 | 23.8 | 15.0 | 22.5 | 30.2 |
| Limerick | 889 | 11.3 | 25.2 | 15.5 | 14.6 | 26.4 | 12.3 | 22.1 | 32.0 |
| Athlone | 927 | 73.5 | 14.0 | 12.5 | 14.8 | 28.0 | 16.7 | 21.3 | 32.9 |
| Average | | 29.5 | 29.0 | 16.4 | 17.6 | 26.7 | 15.3 | 22.4 | 32.0 |
| SMALLER | | | | | | | | | |
| Dundalk | 715 | 93.7 | 0.1 | 16.3 | 16.8 | 24.8 | 12.2 | 28.2 | 32.0 |
| Carlow | 897 | 75.3 | 6.8 | 20.7 | 14.3 | 26.8 | | | |
| Tallaght | 807 | 50.8 | 5.6 | 18.1 | 11.3 | 15.7 | 17.3 | 14.1 | 18.8 |
| Tralee | 609 | 47.3 | 1.3 | 21.0 | 16.1 | 30.2 | 16.1 | 19.2 | 37.5 |
| Letterkenny | 578 | 90.3 | 0.0 | | | | 8.8 | 10.6 | 20.9 |
| Dun Laoghaire* | | | | 21.4 | 31 | 19.1 | 15.0 | 20 | 17.0 |
| Blanchardstown | 389 | 0.0 | 0.0 | 16.9 | 12.1 | 12.1 | 22.9 | 17.9 | 17.9 |
| Average | | 59.6 | 2.3 | 19.1 | 16.9** | 21.5 | 15.4 | 18.3 | 24.0 |

* Points data cannot be computed accurately for Dun Laoghaire because of its high proportion of courses with non-standards points

**Average M1 Lev 6 would be 14.1% if Dun Laoghaire were not included

Such a marked contrast in points would be expected to have matching contrasts in grades of a similar scale at graduation. As evident in Table 40 above, the reality is very different. The smaller Institutes show a 16.5% higher rate of Distinctions at Level 6 and a virtually identical rate of Distinctions at Level 7 to the average across their larger counterparts. In Merit 1 grades, the larger Institutes show a minor superiority at Level 6 (an extra 4.1%) and a more significant excess at Level 7 (an extra 22.4%). In Merit 2 grades the larger Institutes show more significant excesses over the smaller with 24.2% more at Level 6 and 33.3% more at Level 7. The smaller Institutes have a greater rate of pass awards at both Level 6 (extra 8.1%) and Level 7 (extra 39.6%). It should be emphasised that the 'extra' percentages quoted here are expressed in proportionate terms i.e. what proportion or percentage of the smaller figure must be added to reach the larger one.

As with the Level 8 analysis conducted above, an effort was made to validate the findings for the 2002 entrants by comparing the points' profiles and grade percentages at graduation for the combined 2007 & 2008 graduate groups. Level 6 graduates in 2007 & 2008 would normally have entered their courses in 2005 & 2006, whereas Level 7 graduates in 2007 & 2008 would normally have entered in the years 2004 & 2005. The detailed findings for the comparison on

points and grades for Level 6 are contained in Table 41 and for Level 7 in Table 42 below.

TABLE 41: POINTS' PROFILES BASED ON LEVEL 6 AND 7* ENTRY COURSES IN 2005 & 2006 COMBINED AND GRADE PERCENTAGES FOR LEVEL 6 GRADUATES AVERAGED OVER 2007 & 2008

| Institute | % of courses in 2005 & 2006 combined requiring <200 points | % of courses in 2005 & 2006 combined requiring 300+ points | % Distinction Level 6 (Avg. 2007-2008) | % M1 Level 6 (Avg. 2007-2008) | % M2 Level 6 (Avg. 2007-2008) |
|------------------|--|--|--|-------------------------------|-------------------------------|
| LARGER | | | | | |
| Waterford ** | 27.3 | 6.8 | 15.7 | 25.8 | 31.9 |
| GMIT | 61.5 | 20.0 | 21.0 | 20.0 | 20.4 |
| Cork | 34.6 | 28.8 | 23.3 | 24.5 | 24.4 |
| Sligo | 63.3 | 16.3 | 21.0 | 18.8 | 27.4 |
| Limerick | 23.9 | 17.4 | 15.1 | 22.6 | 28.5 |
| Athlone | 83.7 | 9.3 | 19.2 | 29.6 | 28.7 |
| Average | 49.1 | 16.4 | 19.2 | 23.5 | 26.9 |
| SMALLER | | | | | |
| Dundalk | 57.9 | 5.3 | 15.5 | 24.4 | 26.2 |
| Carlow | 73.2 | 7.3 | 31.9 | 20.2 | 19.5 |
| Tallaght | 51.9 | 11.1 | 19.2 | 11.4 | 27.1 |
| Tralee | 56.8 | 13.5 | 19.3 | 22.4 | 29.8 |
| Letterkenny | 85.4 | 4.2 | | | |
| Dun Laoghaire*** | | | 9.4 | 2.7 | 17.8 |
| Blanchardstown | 4.8 | 9.5 | 19.9 | 11.2 | 25.2 |
| Average | 55.0 | 8.5 | 19.2 | 15.4 | 24.2 |

* The CAO on its website does not distinguish between Level 6 and 7 courses when providing points' information

** Unable to obtain 2008 data from Waterford; figures based on 2007 alone

*** Dun Laoghaire not included in course point analysis because of high percentage of courses with non-standard points

The gap in their respective points' profiles between the smaller and the larger Institutes (using percentage of courses) is much smaller for the Level 6 and 7 graduates in 2007-2008, then for those graduates who took up their places in 2002 (using percentage of students). Nevertheless, the larger institutes still had more than double the rate of courses requiring 300+ points among the Level 7 graduates and just under double the rate for Level 6 graduates. The gap between the large and the small in their proportions of courses with points below 200 was, however, much narrower again. It would, nonetheless, be expected that double the rate of 300+ points courses would result in a considerable excess of academically more capable students in the larger Institutes with a resulting higher rate of better grades. In Level 6 Distinctions, the larger and smaller Institutes recorded identical average proportions while at Level 7, the larger showed a small excess (16.9% vs. 15.3) over their smaller counterparts. In Merit 1 grades, the larger Institutes showed a reasonably substantial excess on

average at both Level 6 and 7 and a minor excess in Merit 2 grades but only at Level 6.

Overall, the grade patterns characterising the smaller and the larger Institutes among their 2007 & 2008 Level 6 and 7 graduates, though closer to what might be expected, do not seem to adequately reflect the differences in the points' profiles of the students entering the two sets of Institutes. Neither does the difference between 69.2% and 80.9% achieving the minimum of a grade 2 which is necessary for progression to Level 8 study, though in the expected direction, seem sufficiently large given the points' profiles of the two groups of Institutes.

TABLE 42: POINTS' PROFILES BASED ON LEVEL 6* AND 7 ENTRY COURSES IN 2004 & 2005 COMBINED AND GRADE PERCENTAGES FOR LEVEL 7 GRADUATES AVERAGED OVER 2007 & 2008

| Institute | % of courses in 2004 & 2005 combined requiring <200 points | % of courses in 2004 & 2005 combined requiring 300+ points | % Distinction Lev 7 (Avg. 2007 & 2008) | % Merit 1 Lev 7 (Avg. 2007 & 2008) | % Merit 2 Lev 7 (Avg. 2007 & 2008) | % Eligible for Level 8 Entry (Avg. 2007 & 2008) |
|------------------|--|--|--|------------------------------------|------------------------------------|---|
| LARGER | | | | | | |
| Waterford ** | 13.6 | 15.9 | 10.1 | 35.0 | 40.5 | 85.6 |
| GMIT | 64.4 | 18.6 | 15.6 | 31.4 | 31.5 | 78.5 |
| Cork | 34.0 | 34.0 | 21.8 | 32.9 | 26.9 | 81.6 |
| Sligo | 66.7 | 12.5 | 20.8 | 31.6 | 27.0 | 79.4 |
| Limerick | 40.5 | 21.4 | 15.0 | 32.3 | 35.8 | 83.0 |
| Athlone | 86.4 | 9.1 | 16.7 | 30.1 | 31.0 | 77.8 |
| Average | 50.9 | 18.6 | 16.7 | 32.2 | 32.1 | 80.9 |
| LARGER | | | | | | |
| Dundalk | 67.3 | 3.6 | 11.7 | 35.1 | 39.6 | 86.3 |
| Carlow | 79.5 | 7.7 | 17.0 | 24.8 | 30.9 | 72.7 |
| Tallaght | 55.0 | 10.0 | 18.0 | 14.1 | 31.6 | 63.6 |
| Tralee | 55.6 | 16.7 | 15.2 | 28.6 | 30.6 | 74.4 |
| Letterkenny | 93.2 | 2.3 | 12.4 | 19.8 | 19.5 | 51.7 |
| Dun Laoghaire*** | | | 12.8 | 14.3 | 38.4 | 65.4 |
| Blanchardstown | 0.0 | 11.1 | 20.0 | 15.4 | 34.9 | 70.2 |
| Average | 58.4 | 8.6 | 15.3 | 21.7 | 32.2 | 69.2 |

* The CAO on its website does not distinguish between Level 6 and 7 courses when providing points' information

** Unable to obtain 2008 data from Waterford; 2007-08 grade percentages based on 2007 alone

*** Dun Laoghaire not included in course point analysis because of its high percentage of courses with non-standard points

There is one key potential mediating factor between points' profiles and grades at graduation. That is non-completion or drop-out rates. If a significantly higher proportion of students entering the smaller Institutes failed to make it through Level 6 and 7 courses, the implied attrition of weaker students might be expected to contribute to a better grades' profile than the points would suggest. Fortunately, a recent analysis of the completion rates in all IOTs and

Universities was conducted by the HEA. Referring to course completion rates for Level 6 and 7 students across all of the Institutes of Technology, this study concluded that:

“With the exception of lower non-progression chances in Dublin Institute of Technology, relative to the reference, the Institute of Technology, Blanchardstown, no other institution differs significantly to that reference group. (Mooney et al, 2010,p.49)”

With all 13 IOTs in this study, therefore, showing similar completion rates, the possibility that differences in this respect might help explain the higher than expected grades at the smaller IOTs must be discounted.

If we assume, as in logic we must, based on their contrasting points’ profiles, that the proportion of scholastically more capable students is significantly greater in the larger Institutes, taking all the above analyses together, it follows that grades are significantly inflated at the smaller by comparison with the larger Institutes. This inflation is not evenly distributed across the scale of performance. Instead, it is heavily biased in favour of the relatively higher performing students, thus impacting on Distinctions more than Merit 1 grades and Merit 1 grades more than Merit 2. This may be a product of a contrast effect known to impact on marking and grading (Hales and Tokar, 1975; Heywood, 1982, p. 231; Haar, 2004). At the smaller Institutes with a greater motive to inflate grades so as to achieve a rate of throughput to Level 8 qualifications in the face of academically weaker cohorts of students, those students who do perform relatively well may be seen as especially meritorious and given particularly high marks. Similar students among the academically more capable student body at the larger Institutes may benefit less from this contrast effect and are less likely, therefore, to be awarded top grades.

That academic standards appear to contrast more markedly at the higher marks’ levels cannot be taken to suggest that standards do not contrast across the board. It is difficult to say, for example, what the extra proportion of students being awarded no more than a pass in their awards *should be* in the smaller Institutes by comparison with the larger based on their contrasting points’ profiles. It most probably should be much more than the 8.1% excess at Level 6 and even than the 39.6% excess at Level 7, which characterised the contrast between the two sets of Institutes in the analysis of the 2002 student intake.

It is important to recognise two caveats with respect to the interpretation of the above comparison between smaller and larger Institutes. As with all conclusions based on averages, it does not follow that individual Institutes within each category reflect the characteristics identified for those categories. It is perfectly possible for some Institutes in the ‘smaller’ category to have higher academic standards than individual cases in the ‘larger’ group. In a similar vein, the division at 1000 entrants into the ‘small’ and ‘large’ Institute groups is

arbitrary. Dundalk and Athlone at either side of the division differ much less with each other in numbers than do each with other Institutes in their own groups. Conclusions about standards at individual Institutes from their membership in either category cannot safely be drawn without a careful analysis of their specific figures on CAO points, throughput and grades. What can, however, be concluded is that Institute size does play a significant role in determining the chances of a student at any particular level of ability, gaining a higher grade at graduation. The evidence indicates that it is easier on average to get a better grade in a smaller Institute leading inevitably to the conclusion that grade inflation has been more significant in the smaller Institutes.

3.2.7.4 *Is the Institute Size Effect Mediated by the Discipline Effect?*

Though rendered somewhat unlikely by the findings described in section 3.2.6 above, it remains a possibility that the differences in grading between the smaller and larger Institutes are a product of variation in discipline mix across the two groups. Given that higher grades tend to be awarded more frequently in Science/Technology and in Engineering than in Humanities or Business, a higher grades' profile would be expected to follow if the smaller Institutes had a significantly higher proportion of their graduates in the former two disciplines.

TABLE 43: COMPARISON OF SMALLER AND LARGER INSTITUTES - DISTRIBUTION OF GRADUATES ACROSS THE FOUR DISCIPLINES FOR 2007 AND 2008 LEVEL 8 GRADUATES COMBINED

| | % Science & Technology | % Engineering | % Sc.+Eng. | % Business | % Humanities | % Bus.+Hum. |
|-----------------------|------------------------------|------------------|---------------|---------------|-----------------|----------------|
| Institute | | | | | | |
| LARGER | | | | | | |
| Waterford | 34.8 | 11.4 | 46.2 | 29.9 | 23.9 | 53.8 |
| GMIT | 25.5 | 15.7 | 41.2 | 44.0 | 14.8 | 58.8 |
| Cork | 25.1 | 16.3 | 41.5 | 39.2 | 19.3 | 58.5 |
| Sligo | 24.8 | 22.4 | 47.3 | 38.1 | 14.6 | 52.7 |
| Limerick | 19.2 | 25.6 | 44.7 | 16.4 | 38.9 | 55.3 |
| Athlone | 18.0 | 10.2 | 28.1 | 36.4 | 35.4 | 71.9 |
| Average | 24.6 | 16.9 | 41.5 | 34.0 | 24.5 | 58.5 |
| SMALLER* | | | | | | |
| Dundalk | 31.9 | 12.5 | 44.4 | 35.4 | 20.2 | 55.6 |
| Carlow | 17.0 | 13.0 | 29.9 | 70.1 | 0.0 | 70.1 |
| Tallaght | 15.4 | 11.4 | 26.8 | 60.1 | 13.2 | 73.2 |
| Tralee | 52.5 | 6.3 | 58.8 | 33.7 | 7.5 | 41.2 |
| Dun Laoghaire | 19.3 | 0.0 | 19.3 | 25.1 | 55.6 | 80.7 |
| Blanchardstown | 35.0 | 4.4 | 39.4 | 60.6 | 0.0 | 60.6 |
| Average | 28.5 | 7.9 | 36.4 | 47.5 | 16.1 | 63.6 |

* Letterkenny not included because it did not supply figures breaking down graduate numbers across the disciplines for 2005-2008

An analysis using Level 8 graduates in 2007 & 2008 and in 2003 & 2004 was conducted to identify if this were the case. Tables 43 above and 44 below summarise the relevant figures.

For the combined 2007 and 2008 graduates, the smaller Institutes had, at an average of 36.4%, a smaller proportion accounted for by Science/Technology and Engineering combined than the larger at 41.5%. Looking at individual Institutes, five of the six larger had percentages in Science/Technology and Engineering combined in excess of 40% as compared with only two of the seven smaller Institutes. Tralee, in the smaller Institute group, stands out as an exception having, at 58.8%, the highest proportion of its graduates of all the IOTs in Science/Technology and Engineering.

To check the reliability of the 2007-2008 figures a similar analysis was conducted using the combined 2003 & 2004 data. As evident in Table 44 below, the division between Science/Technology-Engineering combined on the one hand and Business-Humanities combined on the other is almost identical for the smaller and the larger Institutes.

TABLE 44: COMPARISON OF SMALLER AND LARGER INSTITUTES - DISTRIBUTION OF GRADUATES ACROSS THE FOUR DISCIPLINES FOR 2003 AND 2004 LEVEL 8 GRADUATES COMBINED

| | % Science & Technology | % Engineering | % Sc.+Eng. | % Business | % Humanities | % Bus.+Hum. |
|----------------|------------------------------|------------------|---------------|---------------|-----------------|----------------|
| LARGER | | | | | | |
| Waterford | 30.3 | 12.9 | 43.2 | 36.1 | 20.8 | 56.8 |
| GMIT | 17.7 | 17.5 | 35.2 | 49.5 | 15.3 | 64.8 |
| Cork | 28.9 | 20.3 | 49.2 | 35.9 | 14.9 | 50.8 |
| Sligo | 16.0 | 8.9 | 24.8 | 63.1 | 12.0 | 75.2 |
| Limerick | 21.0 | 25.8 | 46.8 | 35.3 | 17.9 | 53.2 |
| Athlone | 13.6 | 12.0 | 25.5 | 56.6 | 17.9 | 74.5 |
| Average | 21.2 | 16.2 | 37.5 | 46.1 | 16.5 | 62.5 |
| SMALLER | | | | | | |
| Dundalk | 30.1 | 10.3 | 40.4 | 49.4 | 10.1 | 59.6 |
| Carlow | 46.5 | 1.1 | 47.6 | 43.2 | 9.3 | 52.4 |
| Tallaght | 18.0 | 11.3 | 29.3 | 60.4 | 10.3 | 70.7 |
| Tralee | 36.8 | 5.9 | 42.7 | 55.1 | 2.2 | 57.3 |
| Letterkenny | 35.8 | 7.4 | 43.2 | 46.5 | 10.3 | 56.8 |
| Dun Laoghaire | 19.3 | 0.0 | 19.3 | 25.1 | 55.6 | 80.7 |
| Blanchardstown | 35.0 | 4.4 | 39.4 | 60.6 | 0.0 | 60.6 |
| Average | 31.6 | 5.8 | 37.4 | 48.6 | 14.0 | 62.6 |

Based on the 2007-2008 and on the 2003-2004 figures, it must be concluded that variations in the distribution of disciplines across the Institutes is not a factor that needs to be taken into account when comparing grades in smaller and larger Institutes. The institute size effect is not mediated in any significant way by the discipline effect.

4. Conclusions and Discussion

Section Summary

This section addresses the implications of the findings, discusses the causes of grade inflation in the sector and proposes measures to address a problem, which, if it were amenable to easy quantification, would now be a national priority.

On-going grade inflation and the absence of comparable standards across Institutes and disciplines are discussed in terms of unfairness to students, difficulties for employers in using qualifications as an employment selection criterion and in terms of the absence of any measurable output by which the contributions of the IOTs to society may be appraised. Since numbers of graduates together with the qualifications and grades they obtain cannot be trusted as comparable indicators of educational success from time to time, from place to place or from individual to individual, it is now impossible to assess what the Institutes of Technology are collectively or individually achieving. It is also impossible for those entrusted with their management and direction to assess the efficacy or consequences of any investments, disinvestments or adjustments they make.

So long as, despite the evidence to the contrary, throughput and grades continue to be blindly interpreted as a sound basis for evaluating and funding Institutes of Technology, the schedules of reinforcement at every level within the sector will continue to reward grade inflation. In such circumstances individual Institutes have no motive to maintain standards because to do so would incur much higher failure rates and diminished throughput, for which they would be punished while those who ignore grade inflation are allowed to thrive. Only a centralised, top-down, determined drive initiated by the Minister for Education and Skills can address the most serious problem facing the IOT sector.

It is crucial that the mission to recover sound academic standards at third level is not seen as inimical to educational and socioeconomic advancement of deprived groups. The view that higher educational standards will be socially regressive is based on a fundamentally flawed understanding of the connection between educational qualifications and relative success in the economy and in society at large.

In addressing the grade inflation problem, the nature, purpose and hierarchy of qualifications at both second and third level in Ireland need to be rethought. The appearance of success for the current system is predicated heavily on grade inflation, which, if halted, would reveal the true untenable extent of failure among students. In the meantime, the minimum educational requirements for access to all third level courses need to be recalibrated so as to ensure a reasonable expectation of literacy, numeracy and general educational skill among college entrants.

4.1 Grade Inflation Continues

There is clear evidence that the process of grade inflation has continued throughout the IOT sector over the 2005-2008 period. This follows a long established trend dating back at least as far as 1994 identified by O'Grady and Guilfoyle (2007a). The on-going rise in higher grades has characterised Level 6 and 8 qualifications in particular. The pattern at Level 7 is less clear. In Ordinary Degrees, while there was an overall rise in the combined top two grades, this was accounted for entirely by a rise in the Merit 1 grade. The rate of Distinctions actually declined since 2004. Whether this indicates evidence of a brake finally being put on grade inflation at Level 7 or whether it represents a temporary reversal in an on-going upward trend remains to be seen. The lack of

any sign of a cessation in inflation at the other qualification levels offers little ground for optimism in this respect.

4.2 Institute and Discipline Variation in Standards

Fitting entirely with the pattern where grades and the actual standard of learning achieved have parted ways in a temporal sense, is the substantial evidence adduced in this paper that there is nothing like a constant relationship between grades and learning across disciplines and across Institutes. It seems clear that academically much weaker students can obtain First Class Honours Degrees in Science, Technology and Engineering than in Business or Humanities. It also seems clear that much weaker students can obtain better grades in smaller than in larger Institutes of Technology. This latter finding offers strong support for the hypothesis that grade inflation is substantially a function of the drive for institutional growth. Those smaller Institutes that, by definition, have been less successful in competing for student numbers have a stronger motivation to drop their standards so as to allow weaker students to enter and remain within the system.

If the existing quality assurance procedures in the IOT sector, in particular the external examining system, is incapable of maintaining parity of standards over time and across Institutes and disciplines, then it is very unlikely that parity of standards across courses, subjects, modules and individual examiners within Institutes is being maintained.

4.3 Consequences of Unreliable Qualifications' Standards

The variance in standards shown in this report inevitably results in the unacceptable reality where any individual grade is a function of a whole series of factors determined largely by chance. It is all profoundly unfair to students whose grades appear to be significantly influenced by the year in which they graduate, the Institute they have chosen in which to study and the discipline they have selected. It is highly problematic for employers who have no way of knowing in any given case what a grade represents in terms of learning and competence.

In addition to the problems occasioned to what may be termed the more direct consumers of education – students and employers – there is another extremely serious problem created for society as a whole with respect to its investment in higher education. The only measurable outputs from third level education are the number of graduates, the qualifications they have obtained and the grades they have achieved. If those metrics have no fixed meaning but, instead, vary widely in what they stand for over time and from discipline to discipline and Institute to Institute, then it is impossible to, in any way, evaluate the whole educational endeavour. The impact of investment or disinvestment in

education cannot be established. If retention levels, graduation rates and grades improve across the IOT sector, this may well be nothing more than a function of standards' erosion and grade inflation. Such educational efforts and financial investment as have been devoted to those ends may have had no impact whatsoever. If investment in education declines, as is the current trend, and graduation rates and grades continue to improve, this may well be a function of the capacity for grade inflation to conceal all shortcomings and not a function of the capacity of the educational system to achieve more with less.

It is now impossible to evaluate what works and what does not work, what should be invested in and what is a waste of resources, within the IOT sector. There is no compass available by which to steer. Genuine success in the sector, as with all of education, lies in the degree to which the process enhances the knowledge, skills and overall competence of the students who pass through. The only possible metric of such success is through the examination and awards system. The clear evidence is that it cannot be trusted to render a reliable and valid account of success. In consequence, each person employed or concerned with the sector, from the Minister for Education and Skills, to the personnel of the HEA, to the Presidents of the Institutes and to all the educators and support staff within them, has no means of judging the outcome of his or her efforts in the service of the sector. An Institute may have better graduation rates and higher grades than another purely because it observes lower standards. When a group of students receive poor grades in their examinations relative to another, it may be a deserved or undeserved outcome. It may to some degree represent differences in the educational service afforded the two groups. It may represent differences in ability and application between the two groups. Alternatively, it may represent the application of lower standards to the group obtaining the higher grades.

At every level and in every way, grade inflation and the associated malleability of academic standards is inimical to the educational process. It wreaks havoc with the development of educational policy. How is it to be rationally decided, for example, what proportion of the population may be expected to be capable of attaining an Honours Degree. The current answer to that question is any proportion at all so long as standards are sufficiently eroded, whereas if grades had a reasonably fixed meaning over time and from place to place, it would be established quickly through experience what standard of scholastic ability and commitment is the minimum requirement for success at that level. In that way the system would be self-regulating and specific educational resources would be targeted at those who stood a reasonable chance of genuinely benefiting from them.

Even in a society with far more resources and with a far greater willingness to devote resources to education, such resources are scarce in the sense that they are not unlimited and resources devoted to one purpose involves a decision not to devote them to an alternative. In all circumstances, scarce resources should be allocated on a rational basis, on the basis of a cost benefit analysis. If there is, say, an extra pot of €10 million available to devote to

education, it has to be decided whether it is best spent at pre-school, primary, secondary or third level and decisions have to be made as to how best to allocate it within any of those sectors. Such decisions can only be made rationally on the basis of where the greater benefit may be expected to be achieved. No reasonable person would suggest that it be devoted to bringing a great many extra students into third level courses to which they are unsuited and in which they will inevitably fail. This would be deemed entirely wasteful. Right now we have no way of knowing whether or not exactly that is happening.

There has been a huge increase in participation at third level in Ireland over the last few decades accompanied by rampant grade inflation. In the absence of any fixed metric against which to judge the performance of those students, it is impossible to estimate what proportion of them genuinely benefitted from the experience, or to what extent the very considerable investment in their higher education could reasonably be justified if the true measure of their knowledge, skill and competence achieved were known. There is no reason why higher education in Ireland should differ in this respect from what has been found in the United States where recently a serious lack of genuine achievement has been uncovered by detailed research (Arum and Roksa, 2011). This research drew on findings from the Collegiate Learning Assessment, a standardized test taken by students early in their courses and again after two years, to show that, in a sample of 2,300 undergraduates across twenty-four institutions, 45 percent achieved no significant improvement at all in a range of core academic skills such as critical thinking, complex reasoning, and writing. They may well have achieved increased basic knowledge about their discipline areas but it is the higher level academic skills - those very skills they are failing to master - which are likely to be, by far, the more transferrable and useful in the longer term in a world of rapid technological change and information obsolescence.

The evidence, such as presented in this paper and in all the papers from the Network for Irish Educational Standards, strongly supports the conclusion that, if today's students in Ireland were measured by the same standards as applied ten or fifteen years ago, a very great many of those emerging with Higher Certificates, Ordinary Degrees and Honours Degrees would have failed, probably in the first year of their courses. Moreover, the evidence is that, even when our focus is limited to the present, graduates are emerging in some Institutes and in some disciplines with qualifications who would, quite assuredly, have failed if they had chosen to pursue other disciplines or attend alternative Institutes. It is certain, therefore, that the return on higher education investment has declined markedly over the last two decades in this country.

4.4 The Imperative to Arrest Grade Inflation and Achieve Consistent Standards

Grade inflation and malleable standards in the IOT system cannot be allowed to continue in Ireland without fatally undermining the integrity of the sector and incurring enormous waste and great economic and social harm. Despite the occasional outburst of concern about the problem, it does not seem to be taken seriously in Irish society. Like global warming, because the problem is so hidden from the public at large, the consequences so difficult to quantify and relate to the causes, the effects so diffuse, gradual and amenable to alternative explanations, it is extremely difficult to have the issue accorded the priority it deserves. Like global warming too, there are so many vested interests for which denial is the most attractive and easiest option that remedial action is very difficult to employ.

No Institute can risk taking action alone, nor is there any organisational motive to do so. Institute managers perceive the success or otherwise of their endeavours as measured in growth and student throughput. Institute financing is tied to those factors. For the managers of any individual institute to seriously engage in constraining grade inflation and maintaining academic standards they would have to set their own Institute at a financial and a marketing disadvantage relative to others that continue to allow grade inflation to proceed. They would have to cause more of their students to fail and drop out and fewer to obtain high grades. They may have to preside over the collapse of add-on courses due to insufficient numbers of students coming through. They would have to accept an overall decline in the size of the Institute due to a decline in number of students and a consequent reduction in capitation finance. All the while they would have to stand by and watch competing Institutes grow and financially thrive through the simple expedient of turning a blind eye to the on-going slide in standards, a malfeasance for which their managers receive no criticism and, on the contrary, for which they are in effect rewarded by seeming to be in charge of a thriving educational institution.

Admonitions by HETAC (2009) that assessment should be “*consistent*,” that “*comparable performance levels should be reflected in comparable grades*” (section 2.2.3 page 9) and that “*Boards of Examiners should be vigilant against any tendency towards grade inflation.....*” (Section 4.8.8), though welcome, will continue to be ignored under the culture that prevails throughout the IOT sector. Only centralised external intervention led from the top can stand any chance of success. The current motivational framework must be reversed so that the maintenance of academic standards is reinforced not punished. Institutes must be subjected to close external and genuinely independent scrutiny to identify evidence of standards’ decline and grade inflation. There must be no financial or other punishments for Institutes that do the right thing when it inevitably results in greater failure rates and reduced student throughput. On the contrary, they must be encouraged to, in every way, reverse the internal set of reinforcement contingencies for academics which currently favour standards’

decline. The default assumption about Institutes, disciplines, courses and lecturers/examiners associated with higher than average failure rates and lower average grades must be biased in the positive direction. In the absence of clear evidence to the contrary, it must be assumed that it is a reflection of the laudable effort to maintain standards. The reflexive bias within Institutes should always be towards suspicion where grades are notably high. In the absence of sound evidence to the contrary, the most likely explanation must be assumed to be low academic standards.

4.5 The Need to Recalibrate the Definition of ‘Qualified Applicant’

A further essential contribution to the halting of grade inflation is an entirely updated definition of ‘qualification’ to enter third level courses. At present, the minimum educational requirement for entrance to a Higher Certificate or an Ordinary Degree level course is five D3 grades in Ordinary Level Leaving Certificate papers (including Mathematics and English or Irish), the equivalent of 25 CAO points. Foundation Mathematics may suffice for some courses. This represents, in reality, such an extraordinary low level of educational attainment after at least 13 years in full time schooling that in the vast majority of cases such students are wholly uneducable in higher education as it is currently constituted. Their standards of literacy, numeracy and overall scholastic competence are by an extreme margin too poor to cope with the NFQ Level 6 or 7 outcomes. The same principle applies to Honours Degree level courses. At present, two C3 grades in Higher Level papers and four D3 grades in Ordinary Level papers (including Mathematics and English or Irish) is sufficient to qualify for entrance. Foundation Mathematics may also suffice for certain Honours Degree courses. Again, this in practice represents a dismally low threshold of scholastic achievement, far below that required to attempt the achievement of NFQ Level 8 learning outcomes.

At what threshold should minimum qualification requirements be set for third level courses? Given that supply of and demand for such courses are balanced through the CAO points system, it is natural to consider what number of points might be identified as an acceptable minimum. Unfortunately, all the evidence indicates that the Leaving Certificate, the basis of the points system, has also been subject to a great deal of grade inflation over the last few decades (O’Grady, 2009). While there is evidence that it does act as a statistical predictor of success at third level (NUI, 2005) it may not be near as reliable an indicator as it should. It is difficult to adduce firm evidence of the extent to which this is the case but there are widespread concerns among third level academics about the degree to which high grades can be obtained in most subjects in the Leaving Certificate by rote learning as opposed to the use of higher level scholastic skills such as understanding, critical thought, ability to apply knowledge in novel circumstances and ability to synthesise knowledge from different sources. Coincidentally, at the time of writing, a letter to the editor appeared in the Irish

Times from a 'Leaving Certificate student' who describes her experience of the educational system in the following terms:

"...we are required to take the Victorian approach of rote learning, which results in a complete lack of understanding of why we are learning a particular topic or how it is significant." (Browning, 2011)

Based on popular commentary, those sentiments appear to be widely shared across Irish society particularly about the nature of the Leaving Certificate examination and the type of learning it encourages.

As discussed above, recent research in the United States (Arum and Roksa, 2011) identified very poor gains in critical thinking and other core skills among Honours Degree students throughout their years in college. Given that grades have risen inexorably at third level for many years in the US, (Johnson, 2003; Leef, 2003; Rosovsky and Hartley, 2002) it would seem that a wide gap has opened between what those grades purport to stand for and what they actually represent. The same may well be true of second level education here. More advanced scholastic skills may now not be a prerequisite for superior grades. More worrying again is the experience of third level educators, this writer very much included, that relatively respectable CAO points' tallies can now coexist with extraordinarily low states of literacy and numeracy. The PISA findings (Cosgrove et al, 2010), discussed above, which show a decline in independently measured scholastic achievement among second level students at a time when Leaving Certificate grades have been constantly improving (O'Grady, 2009) do nothing to allay concerns in this respect.

Independent research is required to identify the current relationship between Leaving Certificate points and standards of literacy and numeracy on the one hand and with standards of higher level scholastic skills on the other. Such research would not only assist in setting qualification thresholds for entry to higher education courses but would be an invaluable source of information to aid in the revision of the LC programme proposed by the Minister for Education and Skills (Murray, 2011).

In the interim, it would be quite easy to use the larger Institutes, in which, according to the evidence presented above, academic standards have been retained to a greater extent, as a test bed to establish the CAO cut-off point tally at which a student is unlikely to be successful in making it through the first year of third level courses at the three different NFQ levels. In this way new qualification requirements can be established which should go some way towards addressing the problem of grade inflation in that the absence of wholly unsuitable students will reduce the pressure to drop standards so as to retain numbers. There are, however, a few risks associated with this approach, which need to be considered. One is the possibility that the reduction in student numbers in higher education, especially in the smaller less popular Institutes, will lead towards an institutional imperative to set standards so that virtually all entrants are retained. This could potentially lead to the cure being worse than the disease. Leaving Certificate performance is, as suggested above, far

from a certain predictor of performance at third level. There have been instances of maximum points' students (600) failing the first year of third level courses through an inability to adjust to the less structured more independent learning expectations in higher education. In addition, perfectly capable students with excellent Leaving Certificate results may make little effort when faced with the freedom of the college experience and may, therefore, fail to achieve the expected learning outcomes. Third level qualifications are awarded not on the basis of ability but on the basis of learning achieved and demonstrated. No minimum academic qualification requirement can guarantee success and so higher education standards should be maintained rigidly independent of the supposed ability of the student body.

A further problem associated with the use of CAO points as a basis for qualification for third level study is that already alluded to, of the potential mismatch between the competencies demonstrated in the Leaving Certificate examination and those required, or which should be required, in higher education. To the extent that the Leaving Certificate rewards rote learning and involves little demand for real scholarship, as is widely suspected, it is far from a perfect predictor of suitability for third level study. Are there alternatives? The most necessary alternative is, of course, a terminal examination at second level which accurately measures literacy, numeracy and more advanced academic skills such as comprehension, application, analysis and synthesis. To what extent all third level courses should require more advanced academic skills is discussed below. At present the best that can be done is to use the Leaving Certificate, as it is, to the best effect and supplement it where necessary by other measures and criteria.

Consideration should be given to minimum English and Mathematics grades as part of the qualification requirements for entry to all third level courses. It is notable that the HEA study on progression through higher education identified that performance in LC mathematics was a specific predictor of the chances of completing courses (Mooney et al, 2010). Given that one would expect that competence in English would be a key requirement for success at third level, based on the requirements for reading and writing in higher education, it is a cause for concern that grades in English were not identified as a predictor of third level success on a par with Mathematics. Can it be that grades in English are now a poor guarantee of genuine linguistic proficiency and that by some mechanism, perhaps through the rote learning of pre-prepared tracts, good grades in Leaving Certificate English can be obtained without the kind of ability to read, understand and write that third level study demands, or at least, should demand?

Standardised literacy and numeracy tests may be useful to employ as alternatives or supplements to Leaving Certificate results. Literacy tests may be particularly important if English grades are a poor predictor of success at third level. For entrants who are not school-leavers and are not admitted on the basis of CAO points, standardised literacy and numeracy tests should be mandatory to identify those who have the requisite levels necessary to cope with higher

education. At present, this task is largely given over to interviews. The poorer record of interviews (particularly unstructured interviews which are the common type in educational selection) by comparison with standardised ability tests in predicting occupational suitability (Schmidt and Hunter, 1998) suggests that appropriate standardised tests would be much more valid in educational selection as well. Indeed, given that estimates of the predictive validity of tests and interviews in the occupational context have been based on performance on a very wide variety of jobs, many of which may occasion limited cognitive demands, it is to be expected that cognitive or mental ability tests would have even greater advantages over interviews in predicting educational suitability where significant cognitive demands should be guaranteed.

4.6 Rethinking Third Level Education

The role of higher education must be rethought. The notion that educational outcomes can be described as a unilinear hierarchy, along which progression can be expected from anyone, is seriously flawed. The National Qualification Authority of Ireland system of levels running from 1 to 10 is dangerously misleading in one particular way. It is predicated on the notion that one level is a stepping stone to the next, presupposing a kind of linear sequence of educational demand and achievement differing only in quantity throughout the hierarchy. Educational outcomes differ, however, in a much more complex way. They differ in both type and quantity. A high level of achievement in one type (e.g. a type that can be accomplished by rote learning or by repeated practice) provides little indication of ability to cope with another (e.g. a type that demands deep understanding and critical thought).

On the dimension of quantity it may be the case that the educational skills that should be taught and practiced in Higher Level Leaving Certificate courses are essentially lower levels of the skills that should be inculcated during an honours degree course. Here the two courses have the same type of educational outcomes, one being a lower level version of the other. Secondary schooling should not, however, focus solely on that one type of educational outcome because only a proportion of the population is suited to the development of those skills. There must be a focus also on alternative educational outcomes for all those who are ill suited to 'academic' study. The acquisition of, e.g., practical skills and procedural knowledge, which may be complex and demanding but do not require abstract thought must be accorded an emphasis and status that is independent of the academic and not regarded as a low level form of the latter. Ordinary Leaving Certificate courses should not be designed nor envisaged only as an inferior version of higher level equivalents.

In higher education, the notion that Level 6 courses are simply preludes to Level 7, which in turn are no more than gateways to Level 8, is entirely wrong. While it is appropriate that Level 8 courses be seen as progressing logically from Higher Level Leaving Certificate study, this should not be true of other third level provision, which should, in the main, enable progression from the

alternative and probably the most frequent second level pathways. As at secondary school, third level education must encompass courses designed to focus on the development of practical skills and associated procedural knowledge and again must avoid too much emphasis on the abstract and on the kinds of academic skills required for honours degree level study.

At present it is assumed that if students can achieve Level 6 outcomes, then they can achieve Level 7 and very likely Level 8. This is a flawed assumption. The very notion of ascribing numerical levels in this way is misleading. It should be possible for individuals to perform very well in one type of third level course without any expectation that they would do well in an alternative type. The assumption that this is the case derives from the notion that each level differs only in quantity from those above or below. Thus, an Ordinary Degree (Level 7) is seen as an inferior Honours Degree (Level 8) and those who possess it are understood to have shown less of the same capacities that have been shown by Level 8 graduates. This can, and to a great extent, has become the case by virtue of the 'academising' of all third level courses. Level 6 and 7 courses have become, to a great extent, inferior versions of Level 8 sustained only by constant standards' erosion so as to allow students who do not possess the right types of educational skills to progress.

Different types of third level study must be available and they must be detached from one another. The obsession with progression within the higher educational system is driven by a narrow 'academic' vision of education which, paradoxically, can only be sustained in practice by progressively undermining academic standards to shoehorn the whole population into an academic model suited to a minority. In the absence of grade inflation the extent of failure in higher education would now be so high that the system would simply have to be reformed. Grade inflation conceals reality so effectively that the need for radical change has not penetrated the consciousness of policy makers nor begun to insinuate its way into popular awareness.

An obstacle to resolving the issue of standards and to reforming the nature of third level education is a common misconception that enabling a higher participation rate at third level even at the price of deteriorating standards is socially progressive. This view is founded on blinkered and seriously flawed thinking. Where more students from disadvantaged backgrounds are enabled to obtain third level qualifications through falling access thresholds, lower standards and grade inflation, they are not being genuinely afforded any advantage at all. In reality they fall victim to a confidence trick. To the extent that they are less academically capable, they emerge from college with devalued qualifications and no higher up the pecking order in society than when they began. They find that their Degrees do not open economic doors because the criteria for access have been changed to ensure that only the more talented are chosen. The jobs which once could be obtained with a Degree now require a First Class or a Master's Degree or a Degree from a more prestigious College recognised as having higher standards. Meanwhile, a whole cohort of less capable students have invested four years in obtaining Degrees, know and can do

precious little extra as a result, and are no more economically or socially advantaged than their predecessors who never went on to third level education.

The only beneficiary of the way higher education has developed is the education industry. This is a topic addressed in considerable detail by Wolf (2002) from the University of London's Institute of Education in her book, 'Does Education Matter; Myths About Education and Economic Growth,' in which she explains why more education, at least of the kind being insisted on, for more and more of the population does not and cannot return the benefits policy makers are so eager to claim at either the level of the individual or at the level of society. Of course, the price paid by society is not only in terms of the waste involved in putting so many through courses from which they are incapable of benefitting but also in terms of the lowering of educational standards with the inevitable consequence that those who are genuinely capable of capitalising on the educational experience end up not nearly as well educated as they might have been.

4.7 The Temptation to Hide the Symptoms

In the UK, the currently preferred solution to similar problems which have undermined confidence in the meaning of degree grades is to eliminate the grades (Vasagar, 2011). It is argued that, because so many students now get Firsts or 2.1s in their Honours Degrees, employers need more detailed information about the educational performance of each student. It is, therefore, planned that in the future all students will be given a document called a Higher Education Achievement Record with details of how they performed in the various modules they studied and on the different assessment approaches to which they were subjected. Once the system gains acceptance, the grades will be phased out.

This approach, while appearing to solve one problem, that of employers trying to identify the more talented among so many graduates having the same high grades, does nothing to address the underlying cause of the problem in the first place, which is that the individual detailed results now proposed to be made available have been inflating and set against ever declining standards. On the contrary, abolishing the summary grades of First, 2.1 etc. will do a great deal to hide the trend of grade inflation and standards' decline rendering the UK higher educational sector even less accountable and allowing it to continue on exactly as before. Faced with a bewildering plethora of 'micro' results for each graduate the task of tracking grade inflation will be much more difficult both within individual educational institutions and across the system as a whole. There may be a genuine case for making more detailed results available than the overall summary grade but the plan to abolish the grades altogether smacks of a determination in the UK higher educational system to sweep its grade inflation problem under the carpet.

It is no accident that Ireland and the UK share the same grade inflation problem. The UK, when it turned all its Polytechnics into Universities, followed

the same ‘academising’ route as Ireland, effectively steering all school leavers towards an Honours Degree without any consideration of the limits among the population of the requisite talents and educational skills. Only grade inflation has ‘saved’ the UK from an unsustainable failure level in its Universities, many of which would, doubtless, have to close if standards had been maintained.

Ireland, though not so formally, followed the same route when it recast its Regional Technical Colleges as Institutes of Technology, albeit, ostensibly, with a separate educational mission to the Universities. In reality, as their shift away from the traditional Certificates and Diplomas, as detailed in this report, and towards Honours Degrees illustrates, the Institutes of Technology have gradually adopted the same mission. The recasting of National Diplomas as Ordinary Degrees is a further illustration of the mission change and of how Level 6 and 7 courses have become in effect the early years of Honours Degrees. As in the UK, it was possible to ignore the limits in the population of those with the necessary skills and abilities for the traditional demands of Honours Degree study by the expedient of grade inflation. Otherwise, unsustainable failure rates would have frustrated the whole educational growth process. With grade inflation there is no limit to the parchments that can be handed out. What those parchments actually mean is not something that the educational establishment is in any way encouraged or rewarded for caring about.

4.8 The Need for National Leadership to Halt Grade Inflation

Ireland must not succumb to the same temptation as in the UK to hide the symptoms rather than seek to cure the disease. In contrast, a real solution to the problem here should be achieved by a determined effort led by the Minister for Education and Skills. This must involve the dismantling of all the reinforcing contingencies for standards’ erosion and their replacement by institutional rewards for measuring educational performance with the highest possible degree of objectivity.

Only when there remains no personal or organisational motive to mask poor or declining student performance will it become possible to arrest grade inflation and to arrive at a situation where graduation rates and grades can tell us anything true about the achievements of the IOT sector or of the students who graduate from it. Until then, the sector will remain like a ship without a compass. In the absence of any measurable outputs with constant meaning, it is impossible to judge whether it is on the right track, where it might be deficient, who or what within it is doing a good job, where and when and for what purpose it may require more or can do with less resources and how it compares with educational systems elsewhere or with its own past performance. Only by halting grade inflation can we get any sense of what proportion of IOT students are entering a type of study to which they are ill fitted and for which alternative courses are required which are not wedded to the traditional academic model.

If education in Ireland is to be harnessed to assist in the rescue of our parlous economic fortunes, grade inflation at all levels must be eliminated. Educational qualifications and their associated grades must be invested with a standardised meaning from time to time and from place to place. Only in that way can we know what our educational system is achieving. Only by knowing what it is achieving can we have any hope of working towards it achieving more.

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