

## **Education: Better results and declining standards?**

### **A Survey of the Evidence**

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There have been dramatic improvements over the last decade in the number of students achieving the expected standard in national tests at all levels. Each year's rises have been met with pronouncements by government ministers on how much the education system is improving.<sup>1</sup> Michael Barber, Head of the Prime Minister's Delivery Unit, has been especially vocal in publicising the apparent gains, stating in 2002 that: 'After five years of urgent and determined progress with some hard evidence of improved outcomes, the evidence of progress is clear'.<sup>2</sup>

From results at Key Stage 2 through to the numbers gaining good degrees, levels of achievement seem to have risen significantly. However, the perceived improvement has been at such an unprecedented rate as to immediately raise questions about its validity and there is a building amount of independent data which show the headline results give a misleading picture of performance. Even if the national statistics were to be believed we should still be concerned over the numbers not reaching the expected standard in the education system and especially with the number of adults who leave education without basic literacy and numeracy skills. Around a quarter of 11 year-olds still fail to achieve the expected standard and roughly a half of 16 year-olds don't get five good GCSEs, while more than 7 million adults lack basic literacy and numeracy skills.

The concern over standards, however, has little to do with a lack of financial resources in the education sector (although this is perhaps not true of higher education). Since 1999-00, expenditure on education has risen by 5% in real terms each year. It is projected to increase from £45 billion in 2002-03 to £57.8 billion in 2005-06, amounting to 5.6% of GDP, which is higher than the European average.<sup>3</sup> Spending per pupil is also rising rapidly. Since 1999-00, revenue spending per pupil has risen from £3,175 per pupil to £4,190 in 2004-05, and by 2007-08 will reach £5,500.<sup>4</sup>

### **Primary Education**

At age 11 all children are expected to sit an exam to test their abilities in literacy, numeracy and science, commonly referred to as Key Stage 2. This follows a similar test for 7 year-olds at Key Stage 1. Official data have been available since 1995 for Key Stage 2 assessments and here we will concentrate on the maths and English results.

The figures have displayed a steeply upward trend, suggesting a dramatic rise in standards, and have been used to promote government policies. On the publication of this year's data, the Schools Minister, Stephen Twigg, pronounced: 'Today's results show that primary schools are making huge strides. Parents and pupils can be confident that standards in schools are getting even better'.<sup>5</sup>

At Key Stage 2 children are expected to reach level 4, which is supposed to represent a reasonable level of literacy or numeracy for that age group. In English, results have risen sharply since 1995, when only 48% achieved this level. By 1999 the figure had

reached 70% and by 2003, 75%. This trend was paralleled in maths. In 1995, 44% achieved level 4. By 1999 this had improved rapidly to 70%, reaching 73% in 2003. The newly revised figures for the 2004 assessments show further gains, with 78% of pupils achieving level 4 in English and 74% achieving the same level in maths.<sup>6</sup> Although the government has failed to meet its own 85% target,<sup>7</sup> and around a quarter of children still fail to attain the expected standard, the results suggest another year of improvement. But has the achievement been 'real'?

In order to assess whether these changes in the national assessment results at the end of primary school represent real changes in pupil's achievement, it is necessary to compare the official results with other independent research data measuring achievement in these subjects. A number of longitudinal studies and other independent assessments have been made which have measured the magnitude of change in literacy and numeracy over time.

### *1. The PIPS project*

The Curriculum Evaluation and Management (CEM) Centre at the University of Durham runs a number of information systems tracking the changing achievements of pupils in literacy and numeracy. The Performance Indicators in Primary Schools (PIPS) project is one such system. Schools and local education authorities opt to join, and currently 155 schools are involved with more than 7,000 pupils from Year 6 (age 10/11) taking the test each year. The tests are specifically written for the PIPS project but are linked to the National Curriculum.

The intention is to provide schools with a baseline measure of achievement for each pupil and to monitor progress year by year. The results for 122 schools, involving over 5,000 pupils, have been aggregated to provide a measure of attainment over time. The scores were standardised to produce a mean of 100 in 1997, although the reading test had to be re-standardised to a mean of 100 in 1999 following changes in the test. Between 1999 and 2002 there was no statistically significant overall increase in reading standards, with the mean standardised scores increasing from 100 to only 101. However, in maths the mean score increased from 100 in 1997 to 109 in 2002.<sup>8</sup>

### *2. The MidYIS project*

The Middle Years Information System (MidYIS) is another monitoring project run by the CEM Centre. It uses a test of developed abilities, which includes a mathematics subtest, and is given to Year 7 (age 11/12). In 2002 the project published its standardised scores for the maths test for over 31,000 pupils each year from 1999. Again the mean was 100, and the score rose from 100 in 1999 to 104 in 2002.<sup>9</sup>

### *3. Davies and Brember (University of Manchester)*

Julie Davies and Ivy Brember, from the School of Education at the University of Manchester, have tested all Year 6 (age 10/11) pupils in the same six randomly chosen schools from one Local Education Authority, using the same test for reading and maths year on year, since 1989, with the latest test data being for 1998.<sup>10</sup> Their figures show a decline in achievements up to 1994, from which point there is a slight but steady improvement. The scores were standardised by Tymms and given a mean

of 100 in 1989. From 1995 to 1998 the reading score rose from 96.8 to 99.6 and the maths score from 99.4 to 102.5.<sup>11</sup>

#### *4. Hilton's textual analysis of statutory tests*

Mary Hilton, of Homerton College, Cambridge, looked in detail at the Key Stage 2 reading tests between 1998 and 2000 and concluded that 'the reading tests were progressively easier for the children to answer. This was because the number of questions requiring higher-order reading skills...decreased each year, while the number of questions requiring the lower-order skills...increased'.<sup>12</sup>

#### *5. National Foundation for Educational Research (NFER)*

The NFER is the body that standardises many of the reading and maths tests scores and which develops Key Stage 2 tests. The tests are standardised so that the average child scores 100. If actual standards are rising, then the tests have to be re-standardised, so that all the scores do not shift upwards. However, the NFER assistant director, Chris Whetton, said in 2002 that 'If there was a lot of evidence that there was a jump or drop in performance then we would have to re-standardise. But this has not happened in the past four years'.<sup>13</sup> Although this does not provide quantifiable evidence, it does suggest that academic standards of children in primary schools had not changed.<sup>14</sup>

#### *6. QCA commissioned report*

The Qualifications and Curriculum authority (QCA) commissioned a report into the claim that standards had been lowered.<sup>15</sup> It compared tests between 1996 and 2000 and claimed that overall, their evidence 'gives the lie to any theory of conspiracy to undermine' standards. However, when the report compared English at Key Stage 2 between 1996 and 1999 it found reading standards had fallen, as cut-scores (the scores identifying grade boundaries) were made more lenient. In 1996, the cut-scores for level 4 and 5 were 57 and 79 respectively, while in 1999, they were 48 and 70, each nine marks lower. Although the 1999 reading test was deemed to be 'harder', meaning that average reading scores were 4 marks lower, the 1999 cut-scores (nine marks lower) 'overcompensated for the difference' by 5 marks.<sup>16</sup> This led the report to conclude that 'some of the recent improvement in Reading results...are illusory'.<sup>17</sup> Contrasting results were found for mathematics, where they state that there 'is no suggestion here that standards...might vary'.<sup>18</sup>

Data were also collected from six LEAs in England that had independent test data for the same period. Effectively, these LEAs had produced their own reference tests. Four had reading test data and concluded that 'children with equivalent reading scale scores have obtained better and better statutory test levels...with an uplift of about a tenth of a level per year' (1996-2000).<sup>19</sup>

Qualitative data were also collected from teachers and pupils concerning the tests. The judgements of a 'small' group of experienced teachers were employed to assess the quality of scripts of pupils from Northern Ireland who had gained level 4 in the 1996 and 1999 papers. Although the study cautions against placing too much emphasis on the exercise, they concluded that 'the majority of teachers involved

considered that the work of children who achieved level 4 in 1999 was of lower quality than that of children achieving level 4 in 1996'.<sup>20</sup> The interviews with children indicated that they 'clearly perceived the 1999 paper to be more accessible and user-friendly than the 1996 version' and 'identified features that had been introduced to help them negotiate the tasks they were set'.<sup>21</sup>

### *Assessing the evidence*

The independent evidence casts doubt on the validity of the dramatic rises seen in Key Stage 2 results, at least in English. As Tymms writes, they are 'so out of step with other longitudinal data as to raise questions about their being true representations of changes in standards'.<sup>22</sup> In mathematics, however, the increases seen in the Key Stage 2 test outcomes were much closer to the results of the independent data.

How can we account for the discrepancy between the two sets of data for English? Why is it that children are gaining better and better results for Key Stage 2 English when these achievements seem not to represent real changes in actual attainment? A number of explanations have been provided.

One possible interpretation is that schools were becoming better prepared for the end of Key Stage primary tests and were 'teaching to the test'. As teachers are becoming more and more concerned about test results they become more inclined to teach exam techniques and this preparation may lead to pupils having a greater capacity to pass tests rather than an indication of pupils necessarily being better at English.

Such 'teaching to the test' has been used to explain apparently miraculous rises in similar 'high stakes' exams in the US state of Texas<sup>23</sup> where the results were found to be illusory by the independent monitoring system known as the National Assessment of Educational Performance (NAEP).

Standards may simply have been lowered. The QCA operate a number of procedures to ensure that standards are maintained over the years. A detailed analysis of these procedures, and their shortcomings, is given by Tymms and Fitz-Gibbon.<sup>24</sup> A number of sources of information are employed to set the cut-scores for each year's test. First, the same anchor test is used each year against which results from the new test are checked. Second, a sample of pupils who are about to take, or have just taken, the real test from one year are given next year's test (pre-testing) so equivalent scores can be estimated. Third, expert judgements are made of the scripts. Fourth, there is expert scrutiny of the questions.

Four possible problems with this process have been identified by Tymms.<sup>25</sup> The first is that attempts have only been made to equate standards from one year to the next. The cut score must equate to a mark and this could never be more accurate than to within one or two marks. Over time, there will be an inevitable drift in standards, and over several years differences will accumulate. The anchor test is meant to safeguard against such drift, but it is limited in this respect as it is only used to check standards from one year to the next and not to check standards across years.

Second, the pre-test, on which marks are based, is 'adrenaline free' as the pupils know that the test is not the real thing and doesn't count, and it is also taken earlier than the

live test, meaning pupils are younger and less prepared. Both of which may mean that pupils will gain lower marks on the pre-test than they would if the test were 'live'. Consequently, when the equivalents are devised standards will be lowered. The lowering of cut-scores in reading, highlighted above by the QCA report, is evidence that the above two influences may have been important.

Third, markers know that schools are under increasing pressure to ensure that pupils gain level 4 in the tests, and this may lead markers to act more leniently towards borderline cases as the stakes are raised.

Fourth, the policy of returning scripts to schools may encourage challenges and a response among markers to give pupils the benefit of the doubt.

To summarise: the statutory test data show dramatic rises in the standards of literacy and numeracy achieved at Key Stage 2, but, especially in English, on the basis of other independent evaluations of standards, the validity of such rises is put into doubt. The system for maintaining standards used by the QCA has a number of problems that may explain the discrepancy between the statutory and independent data and account for the upward shift in results at Key Stage 2 English when pupil attainment remains relatively steady.

## **Secondary Education**

National examinations are also held at 16 (GCSEs) and 18 (A-Levels) and the rise in results has been equally dramatic over the last ten years or more. Again, we can apply independent data to assess whether the increases in examination results really represent an increase in standards. We can also look at international data to see how Britain compares across countries.

### **GCSEs**

GCSE results have shown a remarkable rise in recent years. The introduction of an A\* grade in 1994 was symptomatic and the number of pupils gaining the expected 5 or more A\* - C grades has increased rapidly. In 1997/98 only 46.3% achieved 5 or more A\* - C's while 6.6% had no passes. By 2000/01 the equivalent figures were 50% and 5.5%. The latest results for 2003/04 show that 53.4% of pupils achieved 5 or more grades A\* - C, while 4.2% did not achieve any passes.<sup>26</sup>

It should still be noted that on this basis, nearly half of all 16 year-olds fail to get 5 good GCSEs. Moreover, these figures miss out the fact that many have left the secondary education system way before they even reach taking their GCSEs. A recent report by Ofsted for example, stated that around 9,290 pupils were 'permanently excluded' from school, 83% of whom were from secondary schools. It went on to criticise schools for failing to keep track of these excluded pupils and limiting their chances of achieving any academic qualifications.<sup>27</sup>

What are we to make of the rise in performance in GCSEs? Do these increases in statutory test results at GCSE represent real increases in standards of attainment? To answer this question we need to look at the available independent data, which assesses abilities for this age group.

The CEM Centre's Year 11 Information System (YELLIS), is a monitoring programme providing performance indicators for pupils aged 14-16 (Years 10 and 11). The Basic YELLIS test is a measure of developed abilities providing a baseline of performance, collected from over 1300 secondary schools and 200,000 pupils. The test includes compulsory verbal and maths sections, an optional non-verbal section and a brief questionnaire.

The recorded change in ability since 2001 has been minimal. Results for the test are graded from A to D. For year 10 students (age 14/15), those achieving an A/B has risen from 58% in 2001 to 60% in 2004, while those gaining a B/C rose from 47% to 49% and C/D from 35% to 37%. For year 11 students (age 15/16), the increases are similarly small. Those gaining A/B has risen from 70% in 2001 to 72% in 2004, while students achieving a B/C has increased from 57% to 60% and those awarded C/D from 44% to 46%.<sup>28</sup> The pattern is of a slight upward trend, but the figures do not suggest a rise in achievement of the magnitude seen in GCSE exam results.

Research by Dr Robert Coe of the CEM Centre, has estimated the average GCSE achievement of students with the same score on the YELLIS test. The overall trend is for the GCSE grades achieved by students of the same (YELLIS) ability to increase, inviting the conclusion that exam standards had been lowered.<sup>29</sup>

In August 2001, Jeffrey Robinson, a senior examiner in GCSE maths for the OCR Examination Board, claimed that pupils achieving As and Bs would have received C and D grades ten years earlier. The pass mark for a C grade had fallen from 65% in 1989 to 48% in 2001. In the higher level paper, taken by those with a chance of gaining an A grade, the cut-score for a C had been lowered from 45% in 1988 to 20% in 2001, he argued.<sup>30</sup>

The independent evidence shows levels of attainment either stable or increasing only slightly over time. It is questionable then, whether the higher GCSE grades over the last decade or more, actually reflect real achievements.

Partly in response to this, concerns have been raised over the GCSE system. Mike Tomlinson, the head of a government inquiry into exam reform, cites a number of problems. He bemoans the fact that pupils can finish school without an essential knowledge of what he calls, 'the core' of mathematics and English (functional numeracy and literacy). In giving evidence to the Education Select Committee, he remarked that 'as far as GCSE is concerned...it is impossible to give you that assurance that they have that core well and truly mastered' and that it was 'difficult to defend' the existing system where marks are not deducted for poor grammar and spelling. He said he would like to see the guidelines to markers changed to give them the remit to penalise pupils in this regard. Furthermore, he questioned the policy of allowing pupils to obtain 'five good A\*- C grades at GCSE (the measure of success used by the Government) without studying maths or English' as this means they can leave education or go on to further education, without having mastered the basics in literacy and numeracy. Mr Tomlinson also said it was possible to get '100 per cent in two questions, 0 per cent in another and be regarded as having passed' which also meant that there was no guarantee in the system that the pupil had understood all the areas in the syllabus.<sup>31</sup>

Concerns have also been raised about GCSE coursework which can count for up to 60% of a pupil's GCSE score. The Times Educational Supplement has reported how schools are able to manipulate the system to gain better scores. A supply teacher told the TES how students at a private school in Lancashire were 'allowed up to six 'drafts' of English coursework before submitting a final version for marking'. Several contributors to the TES magazine's website have reported the increasing use of what are called 'writing frames', which are suggested outlines for an essay. They 'allowed some schools to provide virtual model answers'. A former head of English at a secondary school in the north of England said it was 'common to provide a structured plan, paragraph by paragraph, for coursework assignments'. Moreover, it reported that typing in 'GCSE coursework' into a search engine 'reveals more than 10 UK-based essay databases, all offering access to complete coursework essays'.<sup>32</sup>

Where does Britain stand internationally in comparisons of educational attainment for the GCSE age group (13-16)? The Trends in International Mathematics and Science Study (TIMSS) provides comparative data on achievements in mathematics and science. Findings for Year 9 pupils (age 13/14) were produced in 1999 and showed England to be placed 20<sup>th</sup> in Maths, behind less developed nations like Slovenia, the Czech Republic and Bulgaria, and 9<sup>th</sup> in science. The latest study results for 2003 however, exclude England from the exercise because it was categorised as a country which 'failed to meet requirements' because it had an 'unacceptable sampling response rate even when replacement schools are included'.<sup>33</sup> Nonetheless, in a separate publication, the unqualified results for England are given. In Maths we achieve 18<sup>th</sup> place while in Science we come 7<sup>th</sup>.<sup>34</sup> We should note however, that given that the non-participating schools are more likely to be under-performing schools, these results show a strongly upward bias.

The Programme for International Student Assessment (PISA) is another comparative study of student performance across more than 40 countries. It attempts to judge how well 15 year-olds are equipped for modern society by measuring what it calls, 'three forms of literacy': reading, mathematical and scientific. It does this by administering tests and questionnaires to between 4,500 and 10,000 students in each participating country.

The results from the 2000 survey appear to be quite encouraging for U.K students: they come eighth in 'mathematical literacy', seventh in 'reading literacy' and fourth in 'scientific literacy'. However, one prominent academic, Professor Sig Prais of the National Institute for Economic and Social Research, questions the accuracy of these findings as 'serious doubts attach both to the designed objectives of the PISA survey and to the way it was carried out'.<sup>35</sup>

First, the study questions were *not* related to the school curriculum. Rather they were to 'real life' situations – such as the growth of lichen or the breathing cycles of seals, leading inevitably to significant misunderstandings across the socially disparate countries. Second, the chosen age of 15+ is problematic because in some countries – such as Germany or Switzerland – 'some pupils have left school and are in employment or unemployment, and others are in part-time vocational colleges and difficult to reach in a sample survey'. Third, the selection of a specific *year of birth* rather than *school grade* doesn't make allowance for the staggering of school grades

in continental schools, to avoid discriminating against younger, slower maturing-pupils. This meant the survey included such students – entering school a year late or having repeated a class – who would have been in a lower grade.

Fourth, the UK response rate was especially low. The minimum response rate is set at 85% at school level, but in the UK, from the initial sample list of 180 schools, it was only 61% (before a second sample of ‘replacement schools’ was used). ‘The missing schools on the whole were probably low-attaining schools’ so that ‘there must be grave suspicions of upward bias in the average score of responding schools’.<sup>36</sup> Equally, the numbers of pupils participating in these schools, at 81%, was the lowest rate for any of the countries in the survey (compared with 92% in France, Germany, Hungary and Switzerland) and ‘there must be more than a suspicion of lower representation of weaker English pupils’.<sup>37</sup> From the original sample then, under-half (48%) responded (81% of 61%). To compare these results with countries such as France, Germany and Switzerland, where something like 90% of the original representative sample participated, runs the danger of being seriously misleading.

Moreover, the attitude of the British Government’s statisticians compares badly with the approach taken in Germany, where the cities of Berlin and Hamburg also achieved a low response rate of 70%. German statisticians were so anxious not to overstate the achievement of German schools that they left the two cities out. The attitude of statisticians in the DfES was quite the opposite. They went out of their way to give the impression that the UK response rate was comparable, thus significantly exaggerating the real attainments of British schools.

The 2003 PISA was released in December 2004 but Britain was the only developed nation not to appear. Again, there were difficulties with the response rate so that Britain ‘fell significantly short’ of PISA technical standards.<sup>38</sup> As noted above, PISA requires that initial response rates should be 85% at the school level and 80% at the student level and Britain only achieved response rates of 64.3% and 77.9% respectively. In the previous study the difference was made up by a ‘replacement’ group of schools, but in the new study, even these schools failed to register enough responses (77.4%). Consequently, according to the OECD, Britain’s scores ‘cannot reliably be compared with those of other countries’ or with the previous performance results from PISA 2000.<sup>39</sup>

Nonetheless, the UK’s mean performance figures for mathematics, reading and science are given in an Annex (A3). In maths the mean score was given as 508, which would place the UK 18<sup>th</sup>. In reading, the score given was 507 or joint 11<sup>th</sup> with Belgium, while in science the UK achieved a score of 518, which would place the UK 12<sup>th</sup>. Even if we were to accept the validity of the latest PISA data and the UK were included, it looks as though we would not have performed very well, and would almost certainly have done worse than in 2000.

### ***A-Levels***

As with Key Stage 2 and GCSE exams, A-levels results have shown a dramatic improvement in recent years. The percentage gaining grades A-C has risen sharply from 46.4% in 1992 to 69% in 2004 while those passing (achieving grades A-E) has climbed from 79% in 1992 to 96% in 2004. The proportion of A grades has almost



doubled from 12.8% in 1992 to 22.4% this year, while the proportion gaining B grades has increased from 16.3% to 23.4% in the same period.<sup>40</sup>

Dr Robert Coe from the CEM Centre has compared A level results with actual changes in achievement by using the International Test of Developed Abilities (ITDA) which includes maths, verbal and non-verbal elements.<sup>41</sup> In all six subjects studied, attainment fell steadily. In mathematics, the average ITDA score was 72.3% in 1988, while by 1998 it had dropped to 59.3%. At the same time the average A-level score for this subject increased from 3.78 to 5.69. In English Literature, the ITDA score dropped from 57% to 51.5% between 1988 and 1998 while the average A level grade increased from 4.59 to 5.96. In Biology, the ITDA fell from 63.7 to 53.4 in the same period, and the average A level grade increased from 4.33 to 5.24. Similar trends were found in history, French and geography (A level grades are coded as follows: A=10, B=8, C=6, D=4, E=2, N=0 and U= -2).

The evidence suggests that actual attainments have fallen while A-level grades have risen. Dr Coe estimates the extent of A-level grade inflation between 1988 and 1998 for students with the same ITDA score of 60%. He concludes that: 'A fair summary would be to say that A level candidates across a range of subjects achieved over a grade higher in 1998 than candidates of the same ability had done in 1988'.<sup>42</sup> Similar research has been carried out by the Engineering Council into the achievements of students taking A-level mathematics.<sup>43</sup> It used a diagnostic test designed by Coventry University, consisting of 50 multiple-choice questions taken by 600 students per year. In 1991 those with a grade B at A level scored 40.5/50. In 1998 they scored 36.8/50. At grade C the gap was from 39.9 in 1991 to 32.1 in 1998. As the report comments, the score of 32.1 in 1998 was 2.3 marks lower than the N grade in the same year. It concluded that there is 'clear evidence' of a 'decline over time in the competency of students with the same A level grade'.<sup>44</sup>

Professor Tymms has demonstrated that some A-level subjects are easier than others and that they should therefore, not be accredited equal weight.<sup>45</sup> By using what he calls the '50% Framework', which rests on the assumption that previous achievement predicts about 50% of subsequent variation in results, comparisons are made between the grades awarded to pupils in different A-level subjects and their GCSE results. He found that pupils with a grade B at GCSE in history, economics, geography, English, sociology and business studies went on to score, on average, a grade C in the same subjects at A-level. In contrast, those with a B grade at GCSE in maths, computing, German, French, chemistry, physics and biology were likely to gain a grade D at A-level. The concern is that 'more and more people are drifting away from the severely graded subjects into the others'.<sup>46</sup>

On the basis of the independent evidence there is reason to be sceptical that the increases in examination results reflect an equivalent rise in standards. Rather, the data suggest that standards across-the-board at A-level may have actually fallen while results have surged, and that many increasingly popular A-level courses are less demanding than other more traditional subjects.

### *Higher Education*

A similar story can be told for universities. Thirty years ago, less than one student in three achieved an Upper Second or First.<sup>47</sup> By 1998 this figure had reached 50% or 109,200 students, rising to 55% or 122,000 in 2004.<sup>48</sup> The numbers gaining firsts has also risen from 16,800 (7%) in 1995, to 19,500 (8%) in 1998, and again to 28,300 (10%) in 2003.<sup>49</sup>

In 1960, Oxford awarded 8.5% of students with Firsts and 33% with Thirds. In 2002 the number of Firsts awarded was 23% and Thirds, 8.5%.<sup>50</sup> Some three-quarters of students from Oxbridge now graduate with an Upper Second or better.

The Russell Group – composed of 19 leading universities – gave firsts to 15.5% of students in 2003, compared with 11.8% in 1998. From 1998 to 2003, the proportion of first and upper second class degrees awarded by the Russell Group rose from 61.6% to 66.6%, according to the Higher Education Statistics Agency (HESA).<sup>51</sup>

The overall picture is that more and more students are gaining better degrees, especially Firsts. However, research carried out by London Metropolitan University suggests that the standard required of students in achieving first class honours varies considerably across universities, and in most, is below what is expected.

The study by Curran and Volpe<sup>52</sup> looks at 58 British universities and reveals that there is a ‘high degree of heterogeneity concerning the degree classification regulations adopted by British Universities’, so that students with equal or similar marks are awarded different degree classes.<sup>53</sup> Specifically, there is a large disparity between institutions, in the marks required to achieve a First Class degree, ranging from 68.7% at the University of East Anglia, to just 50.8% at Sunderland University. Moreover, on average, it is the newer universities that require lower marks for a First (59.8% average compared with 63.2% for ‘Old’ universities): ‘Generally, it would appear easier to achieve a First Class degree from a ‘new’ university’.<sup>54</sup>

There is growing concern then, that First Class degrees are being awarded too freely to students and that the degree classification system has become outmoded, unable to distinguish between above-average candidates. The Scoping Group, chaired by Professor Burgess, Vice-Chancellor of Leicester University, has reported on this issue.<sup>55</sup> It concluded that the current grading system has ‘outlived its usefulness and is no longer fit for purpose’ as it fails to give enough information about candidates. The suggestion is to explore alternative systems such as the use of grade point average (GPA) scores, as used in the USA, the use of transcripts, and the use of cumulative point scores, in order to provide a more detailed ‘progress file’ which employers can use to judge candidates more accurately.

Further evidence from surveys of academics suggests that the standards of those attending university is falling, while at the same time, the pressure on academics to pass students is increasing. The Times Higher Educational Supplement has revealed the concerns of many academics with the quality of students going to university. A survey of almost 400 academics found that 71% agreed their ‘institution had admitted students who are not capable of benefiting from higher level study’. Almost half (48%), claimed that they ‘felt obliged to pass a student whose performance did not

really merit a pass'. 42% said that 'decisions to fail student's work had been overruled at higher levels within the institution', while one in five had turned 'a blind eye' to student plagiarism.<sup>56</sup>

The decline in the preparedness of students entering university is evidenced in a report by the Engineering Council.<sup>57</sup> At least 60 departments of mathematics, physics and engineering give diagnostic tests to new undergraduates. They reveal 'strong evidence' of a steady decline over the decade up to 1999 in basic maths skills and the level of mathematical preparation. In addition to the Coventry University study already mentioned, the Engineering Council also cites a study by Professor J. Mathew of the University of York. Between 1979 and 1999 the physics department gave students a maths test with 50 multiple-choice questions with four-answer choices. Performance was constant up to 1990, then there was a sharp fall, followed by a steady decline over the last decade to 1999 (the last year reported).

There is growing evidence then, which indicates that students are being awarded top class degrees without reaching the standards expected; that many academics are feeling pressurised into awarding such good marks and passing undeserving students, and that students are starting university ill-prepared for degree level study.

### ***Adult Education***

Millions of adults in the UK have difficulties with simple literacy and numeracy. In 1998 the Department for Education and Skills (DfES) established a working group on adult literacy under the chairmanship of Sir Claus Moser, Chairman of the Basic Skills Agency. It reported in 2002 and in his Foreword, Sir Claus states that, 'people are staggered when one confronts them with the basic facts about literacy and numeracy, and rightly so'.<sup>58</sup> The report claims that roughly 20% of adults, perhaps 7 million people, have severe problems with basic skills, particularly 'functional literacy' and 'functional numeracy'. That is, 'the ability to read, write and speak in English, and to use mathematics at a level necessary to function at work and in society more generally'. To illustrate the meaning of the term 'functional literacy' the working group said that one in five adults, if given the alphabetical index to the Yellow Pages, couldn't locate the page reference for plumbers.

It cites a report by the Centre for Longitudinal Studies (CLS) at the Institute of Education. The Centre has carried out a series of studies of adults' basic skills for the Basic Skills Agency, drawing on the National Child Development Study (NCDS) which comprises a sample of over 17,000 people born in a single week in 1958. The most recent survey, *It Doesn't Get Any Better*, was carried out on a 10% sample of NCDS cohort members when they were aged 37. It included a basic skills assessment, which comprised a set of functional literacy and numeracy tasks designed by the National Foundation for Educational Research (NFER). The tasks were grouped at different levels corresponding to the Basic Skills Agency (BSA) Basic Skills Standards. Each question was coded as correctly answered, incorrectly answered or not attempted, and these scores were grouped into four ability categories: "very low", "low", "average" and "good".

Around 6% of the adult working population are judged to have 'very low' literacy skills, with a further 13% having 'low' literacy skills. Those with very low skills will

have enormous difficulty with any simple reading, especially any texts, but may be able, with the aid of illustrations, to read signs or advertisements. Those with low literacy skills are likely to be able to read a short article from a tabloid newspaper, but may read slowly and with little understanding. According to the report, this means that around 20% of adults are less literate than 11 year-olds, and 6% are less literate than 7 year-olds. Problems with numeracy were even more prevalent. The CLS judged that 25% had abilities lower than those expected of 11 year-olds, while 23% had abilities below those expected of 7 year-olds.

The Moser group's findings have been re-affirmed by the more recent 2003 'Skills for life' survey, commissioned by the DfES. Again, looking into levels of adult skills in literacy and numeracy, it surveyed 8,730 randomly chosen adults aged 16-65. It showed that 5.2 million or 16% of adults had literacy skills below Level 1, or the standard expected of 11 year-olds. In terms of numeracy this figure rose to a staggering 15 million, or 47% of adults.<sup>59</sup>

Where does the UK stand in relation to other countries? The International Adult Literacy Survey (IALS) originally published by the OECD in 1995, with further rounds in 1997 and 2000, attempts to compare literacy skills in 20 different countries for 16-65 year-olds. Literacy is defined in the survey as the 'ability to understand and employ printed information in daily activities, at home, at work and in the community'.<sup>60</sup> It is separated into three domains of literacy skill: prose literacy (ability to understand and use texts like editorials, news stories and brochures), document literacy (ability to locate and use information in various formats such as job applications, maps and charts) and quantitative literacy (knowledge and skill required to apply arithmetic operations to numbers in printed material like balancing a chequebook). Each country is then measured according to these variables on a scale ranging from 0 to 500. This range is then divided into five broad literacy levels. Level 3 is considered to be the minimum desirable threshold to cope with the demands of everyday life.

Over 50% of the UK population were deemed not to meet this level for each literacy type, with more than 20% of the population achieving only the most basic score of level 1, indicating 'very low literary skills, where the individual may, for example, have difficulty identifying the correct amount of medicine to give to a child from the information printed on the package'.<sup>61</sup> Comparatively, the UK was deemed to be below average for each literacy type. It came 13<sup>th</sup> for prose literacy, 14<sup>th</sup> for document literacy and 15<sup>th</sup> for quantitative literacy.<sup>62</sup>

These levels of adult illiteracy and innumeracy are placing a serious burden on business. In August 2004, a CBI survey of over 500 firms found that 37% were not satisfied with the basic literacy and numeracy of school leavers, up from 34% in the 2003 survey. During the previous 12 months, 33% of firms had to give school leavers basic training in literacy and numeracy. Overall, employers spend over £23 billion each year on training with a significant amount being spent on this basic training. Digby Jones, CBI Director-General, has commented: 'Too many school leavers are failing to make the business grade. A fundamental working knowledge of English and Maths provides a vital foundation for every day-to-day business task. But the education system is letting down many young people and leaving them unprepared for the world of work'.<sup>63</sup>

## Conclusion

According to the DfES, 'Education is the number one priority for this government' and it has certainly provided massive inflows of funds into the education system over the last few years.<sup>64</sup> Since 1999-00 spending has increased by 5% in real terms year on year. By 2005-06 it is forecast to reach 5.6% of GDP, ahead of the European average. However, the government's claim that such increases in funding have 'resulted in a measurable improvement in standards' is questionable.<sup>65</sup>

The Government claims that education standards are rising because the numbers passing national examinations is increasing. The amount of 11 year-olds passing their Key Stage 2 tests in English at the expected level 4 has rocketed from 48% in 1995 to 78% this year (with a similar upsurge in maths). Stephen Twigg, the Schools minister, has used these figures to claim that 'we've seen some really very remarkable and sustained progress in attainment in literacy and numeracy'.<sup>66</sup>

At 16, those achieving 5 or more A\*-C grades has risen from 46.3% in 1997/8 to 53.4% in 2003/4 while at 18, those gaining A-C at A-level has risen from 46.4% in 1992 to 69% in 2004 leading David Miliband, the Schools Standards minister, to claim that 'Schools are continuing to make year-on-year progress on standards'.<sup>67</sup>

A similar story can be told for university students where 55% achieve either a First or Upper Second class degree today, compared with less than one in three thirty years ago. However, despite these increases in national test data, there is reason to be sceptical that attainment has increased to anything approaching the extent the statutory figures suggest. In fact, there is considerable independent analysis pointing towards relatively static or even declining levels of attainment at these different stages in the education process, indicating that exam standards have slipped.

Even if we were to accept the validity of the rises seen in the national data, the raw numbers underachieving or leaving education without basic skills are still highly concerning. Nearly a quarter of 11 year olds fail to meet the expected grade for their basic tests, while around half of all 16 year olds leave school without 5 or more GCSEs. Perhaps the most worrying area is in adult education where we are faced with between 5 and 7 million adults who are less literate than a competent 11 year-old, while in terms of numeracy this figure rises to an astonishing 15 million.

## Notes

<sup>1</sup> Charles Clarke in DfES Departmental Report 2004.

<sup>2</sup> Web: [www.cybertext.net.au/tct2002/disc\\_papers/organisation/barber.htm](http://www.cybertext.net.au/tct2002/disc_papers/organisation/barber.htm)

<sup>3</sup> 'Education and skills - investment for reform', Department for Education and Skills, 2002.

<sup>4</sup> Web: [http://www.hm-treasury.gov.uk/media/326/0F/sr2004\\_ch07.PDF](http://www.hm-treasury.gov.uk/media/326/0F/sr2004_ch07.PDF)

<sup>5</sup> DfES, Press Notice, 02.12.04 'Achievement and attainment tables show primary schools making further strides'.

<sup>6</sup> National Curriculum Assessments of 11 Year Olds in England, 2004 (Provisional) DfES

<sup>7</sup> DfES Annual Report 2004: 55.

<sup>8</sup> Web: [www.pipsproject.org/standardsvertime.asp](http://www.pipsproject.org/standardsvertime.asp)

<sup>9</sup> Ibid

- <sup>10</sup> Davies and Brember (1997) 'Monitoring Reading standards in Year 6: a 7-year cross-sectional study', *British Educational Research Journal*, Vol. 23: 5, pp 615-622.
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- <sup>11</sup> Tymms, P (2004) 'Are standards rising in English primary schools?', *British Educational Research Journal*, Vol. 30: 4, pp 477-494.
- <sup>12</sup> Hilton, M (2001) 'Are the Key Stage 2 Reading tests becoming easier each year?', *Reading*, pp 4-11.
- <sup>13</sup> *Times Educational Supplement*, 10.05.02.
- <sup>14</sup> Tymms (2004) p. 482.
- <sup>15</sup> Massey et al (2002) *Comparability of national tests over time: key stage test standards between 1996 and 2001. Final report to QCA of the comparability over time project (Research and Evaluation Division of the University of Cambridge Local Examinations Syndicate)*.
- <sup>16</sup> *Ibid*: 216.
- <sup>17</sup> *Ibid*: 63.
- <sup>18</sup> *Ibid*: 71.
- <sup>19</sup> *Ibid*: 197.
- <sup>20</sup> *Ibid*: 125.
- <sup>21</sup> *Ibid*: 147-8.
- <sup>22</sup> Tymms and Fitz-Gibbon, C (2001) 'Standards, achievement and educational performance' in Philips, R and Furlong, J. *Education, Reform and the State: Politics, policy and practice, 1976-2001* (Routledge: London) p. 162.
- <sup>23</sup> Klein et al (2000) 'What do test scores in Texas tell us?' (Santa Monica, Rand).
- <sup>24</sup> Tymms, P and Fitz-Gibbon, C (2001) pp. 161-164.
- <sup>25</sup> *Ibid*.
- <sup>26</sup> DfES, GCSE and Equivalent Results for Young People in England, 2003/04.
- <sup>27</sup> *Times Online*, 10.12.04 'Authorities lose track of 10,000 expelled students'.
- <sup>28</sup> Web: [www.yellisproject.org/Newsletter.asp?n=40&d=092004](http://www.yellisproject.org/Newsletter.asp?n=40&d=092004)
- <sup>29</sup> Coe, R (1999) 'Changes in Examination Grades over Time: Is the same worth less?' Web: [www.cemcentre.org/research/examchanges/BERA2.html](http://www.cemcentre.org/research/examchanges/BERA2.html), Figure 7.
- <sup>30</sup> *Daily Telegraph*, 24.08.2001.
- <sup>31</sup> Uncorrected transcript of oral evidence, Education and Skills Committee, 24.11.04.
- <sup>32</sup> *Times Educational Supplement*, 21.03.03, p. 7.
- <sup>33</sup> Web: <http://nces.ed.gov/pubs2005/2005005.pdf>
- <sup>34</sup> Web: [http://timss.bc.edu/timss2003i/intl\\_reports.html](http://timss.bc.edu/timss2003i/intl_reports.html)
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- <sup>37</sup> *Ibid*: 151.
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- <sup>41</sup> Coe, R (1999), above.
- <sup>42</sup> *Ibid*.
- <sup>43</sup> Web: [www.engc.org.uk/publications/pdf/mathsreport.pdf](http://www.engc.org.uk/publications/pdf/mathsreport.pdf)
- <sup>44</sup> *Ibid*: 8.
- <sup>45</sup> Tymms, P and Fitz-Gibbon, C (2001), above.
- <sup>46</sup> *Guardian* 02.09.04, 'Some A-levels 'easier than others'.
- <sup>47</sup> Web: [www.news.bbc.co.uk/1/hi/education/2986691.stm](http://www.news.bbc.co.uk/1/hi/education/2986691.stm)
- <sup>48</sup> Web: [www.hesa.ac.uk/press/sfr70/sfr70.htm](http://www.hesa.ac.uk/press/sfr70/sfr70.htm)
- <sup>49</sup> Higher Education Statistics Authority: PR12, PR28, SFR70.
- <sup>50</sup> Bartholomew, J (2004) *The Welfare State We're In (Politico's: London)* p. 180.
- <sup>51</sup> Web: [www.news.bbc.co.uk/1/hi/education/3515984.stm](http://www.news.bbc.co.uk/1/hi/education/3515984.stm)
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- <sup>53</sup> *Ibid*: 4.
- <sup>54</sup> *Ibid*: 19.

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- <sup>55</sup> Measuring and Recording Student Achievement: Report of the Scoping Group chaired by Professor Robert Burgess (2004). Web: <http://bookshop.universitiesuk.ac.uk/downloads/measuringachievement.pdf>
- <sup>56</sup> Times Higher Educational Supplement, 'Poll reveals pressure to dumb down' 19.11.04.
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- <sup>58</sup> Web: [www.lifelonglearning.co.uk/mosergroup/](http://www.lifelonglearning.co.uk/mosergroup/)
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- <sup>61</sup> Ibid: xi.
- <sup>62</sup> Ibid: 17-18.
- <sup>63</sup> CBI Press Release, 20 August 2004.
- <sup>64</sup> Web: <http://www.dfes.gov.uk/2002spendingreview/pdf/investmentforreform.pdf>
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- <sup>66</sup> Web: <http://www.dfes.gov.uk/speeches/latest.cfm>
- <sup>67</sup> Web: [http://www.dfes.gov.uk/pns/DisplayPN.cgi?pn\\_id=2004\\_0186](http://www.dfes.gov.uk/pns/DisplayPN.cgi?pn_id=2004_0186)