Good Practice

# Targets: A-level value-added measures

Learning+Skills Council

# Contents

# What do we mean by "value-added"?

While examination results tell us what students have achieved, they do not tell us what progress students have made. Examination results do not take into account the fact that some students make a lot more progress than others. The progress that schools and colleges help individuals to make relative to their different starting points is usually referred to as value-added or distance travelled. Two students with identical A-level results may have had very different GCSE results. In effect, one student will have made more progress than the other.

For 16 -18 year olds there are common examinations which are widely used for comparison. Using level 2 (GCSE/GNVQ) results as a starting point, it is possible to measure the progress made by students at a particular school or college, by comparing their level 3 (A-level, AS, advanced GNVQ, AVCE) results with those achieved nationally by other students with similar level 2 results. For example we would expect a student with 5 GCSEs at grade A to perform better at level 3 than a student with 5 GCSEs at grade C. If they both achieved the same grades at A-level then the student with the lower GCSE grades would have made more progress and would therefore have a higher value-added score.

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**Example of how progress is measured:**
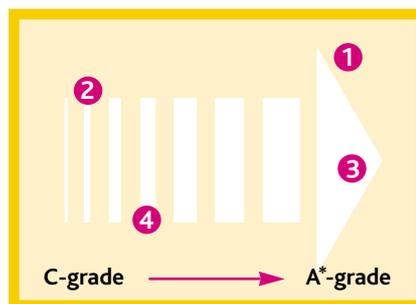
**Average GCSE grade (starting point)**

C-grade ⟶ A*-grade
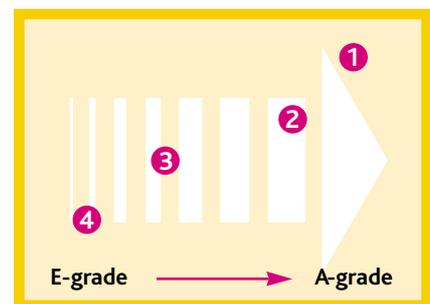
**A-Level grade (outcome)**

E-grade ⟶ A-grade

In this illustration, student 1 achieves the highest A-level grade, but student 2 has made the most progress in relation to his/her starting points, and so student 2 has the highest value-added score. In contrast, student 4 has the lowest A-level grade, but student 3 has made the least progress and hence has the lowest value-added score.

# Why use "value-added"?

Recent OfSTED area-wide inspection reports have highlighted the need for value-added measures to be used to measure performance at individual, subject and provider level. The *Common Inspection Framework* states that inspectors, in making judgements on how well students achieve, should consider the extent to which "analysis of added value indicates that students make at least the progress expected of them". Value-added measures should enable schools and colleges to:

- be in a better position to help students achieve their full potential

- provide a more realistic basis for identifying good practice in teaching and learning

- measure performance more accurately at all levels, e.g. at institution, subject, department and individual levels

- make use of a fairer and more sophisticated performance indicator than the raw achievement indicator.

**Value–added analysis can be used with individual students to:**

- set them more realistic targets

- monitor their progress towards achieving these targets

- identify possible problems early enough to take action

- provide them with a more realistic assessment of what they can achieve.

**Value-added analysis can be used to improve performance at subject/department level by:**

- enabling realistic targets to be set and monitored

- making course reviews more effective in measuring performance and differences in performance between departments

- helping to identify the training needs of members of staff more effectively

- enabling schools and colleges to make an assessment of the appropriateness of entry criteria.

Value-added analysis may also be used to produce a fairer comparison of performance between schools and colleges than can be given by raw qualification data. However robust value-added measures are only available for use with A-level courses and many colleges offer a much wider range of courses than just A-levels.


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# Key findings in case studies of schools and colleges using value-added measures

- Most schools and colleges using value-added measures have seen an overall improvement to the A-level grades achieved by their students.

- Several schools and colleges have identified consistently poor results in some departments by comparing year-on-year value-added scores. In several cases, this has led to a change to a more appropriate syllabus or a change in teaching methods.

- Value-added measures have helped to identify departments in which students' progress is consistently above average, in many cases leading to the identification and sharing of good practice in teaching and learning.

- Using value-added measures as a basis for setting targets allows for early identification of those students who may require additional support to complete their programmes.

- Students find that using value-added measures to set target grades helps motivate them, especially when tutors make use of chances graphs[1] with students.

- Value-added analysis has often been used to identify differing levels of performance between male and female students, leading to improved methods of teaching in single sex or mixed classes.

- Value-added systems take 2-3 years to embed. Most schools and colleges introducing value-added systems have initially met with some resistance. However the resistance has been overcome once the effectiveness of value-added measures has been demonstrated.



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[1] Chances graphs show the likelihood that a student might gain a grade above their target grade.

# Impact of Curriculum 2000

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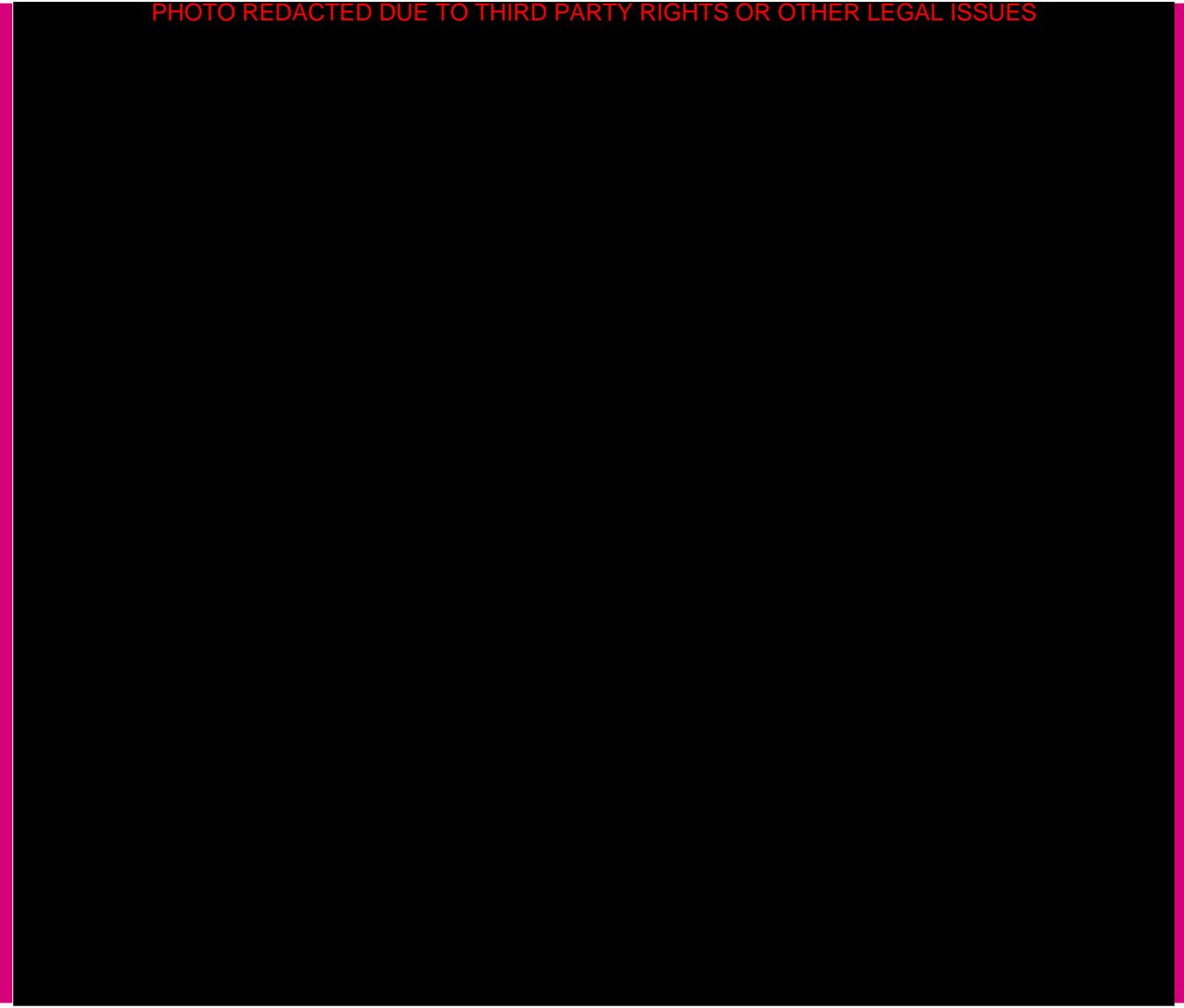
With the replacement of advanced GNVQs by AVCEs and the introduction of AS and A2 programmes, existing value-added systems will need to be reviewed and updated.
This document outlines some of the methodologies currently in use.

# Performance tables

| Grade | GCSE points |
|-------|-------------|
| A* | 8 |
| A | 7 |
| B | 6 |
| C | 5 |
| D | 4 |
| E | 3 |
| F | 2 |
| G | 1 |

### Performance Tables

The Department for Education and Skills (DfES) intends to introduce value-added performance tables in the near future for those schools and colleges offering AS/A-levels/AVCEs to 16 -18 year olds. Following the introduction of Curriculum 2000, DfES intends to run a pilot study in 2003. Depending on the outcomes of the pilot, a value-added performance indicator may be included in performance tables in 2005.

### Vocational Qualifications

At present there are no robust value-added systems for level 3 vocational courses other than for advanced GNVQs. There is no evidence that other vocational qualifications can be treated in the same way.

### Understanding the common elements of value-added systems

The most widely used value-added systems for measuring performance between level 2 and level 3 that practitioners and managers have access to are the system piloted by DfES in 2000, ALPS (A-level Performance System) established by Greenhead College, and ALIS (A-level Information System) established by Durham University. The remainder of the report relates to these value-added systems. All value-added systems convert qualification grades into numerical scores. Points are awarded for GCSE programmes as illustrated in table above:

In addition, when using the DfES pilot system or the ALPS system, points are awarded for additional level 2 programmes:

| Grade | Full GNVQ points | Part One GNVQ points |
|-------|------------------|----------------------|
| Intermediate Distinction | 30 | 15 |
| Intermediate Merit | 24 | 12 |
| Intermediate Pass | 20 | 10 |
| Foundation Distinction | 16 | 8 |
| Foundation Merit | 12 | 6 |
| Foundation Pass | 6 | 3 |

Points are awarded for level 3 programmes as below.

Note: The ALIS system allocates a score of −2 for U grades. The DfES pilot system and the ALPS system allocate a score of 0 points for a grade U.

| Grade | A-level points |
|-------|----------------|
| A | 10 |
| B | 8 |
| C | 6 |
| D | 4 |
| E | 2 |
| N | 0 |

| Grade | Advanced GNVQ points (ALPS and DfES pilot) | Advanced GNVQ points (ALIS) |
|-------|---------------------------------------------|-----------------------------|
| Distinction | 18 | 3 |
| Merit | 12 | 2 |
| Pass | 6 | 1 |
| Fail | 0 | -1 |

# The Department for Education and Skills (DfES) Pilot

The government is committed to the publication of value-added performance tables for schools and colleges, based on the progress made by individual students from one stage of their education to another. DfES undertook a pilot study in 2000 to look at how value-added might be measured post-16. The pilot compared the progress made by students between level 2 results at age 15 and level 3 results at age 17, and involved a broadly representative national sample of 155 schools and colleges.

An individual student's value-added 'score' is calculated as the difference, positive (+) or negative (-), between their total level 3 point score and the median total level 3 point score for all students with the same average level 2 point score.

To give an example, a student with an average level 2 score of 6.0 would be expected to score a total of 18 points at level 3. If this student scores a total of 22 points, his/her value-added score would be +4, indicating that the student has performed better than the median student with the same level 2 entry score.

*The graph below gives the pattern scores for all students nationally.*
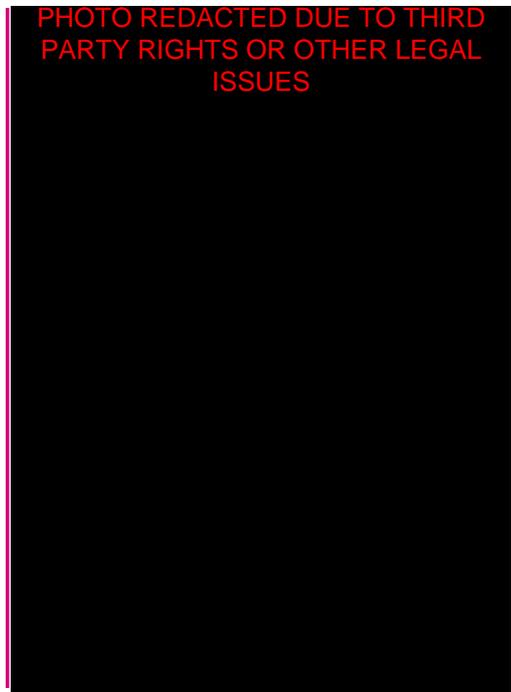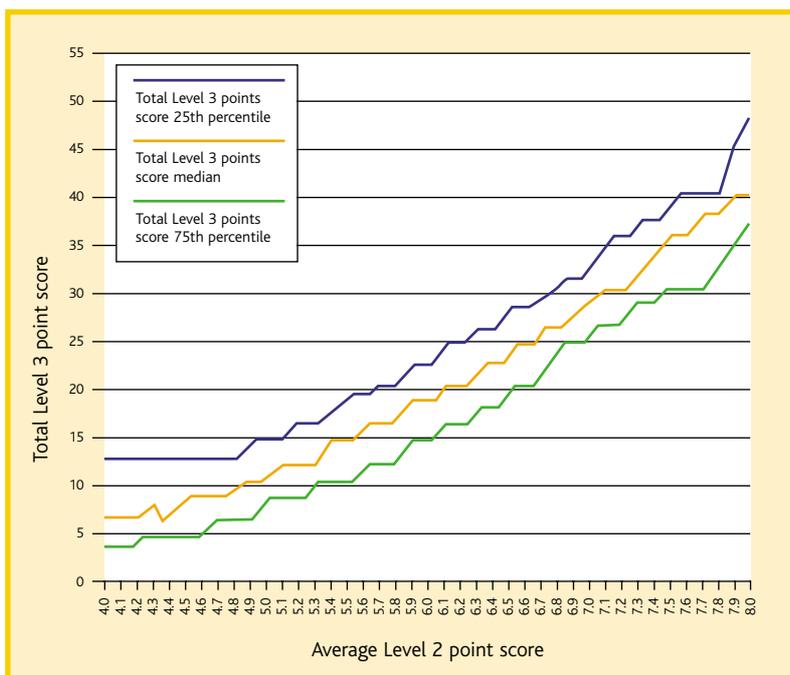
[2] *The 75th percentile line indicates the level at which the top 25% or learners exceed. The 25th percentile line indicates the level that the bottom 25% of learners fail to reach.*

Average GCSE/GNVQ point score 25th percentile

Average GCSE/GNVQ point score median

Average GCSE/GNVQ point score 75th percentile

Level 3 point score

Average GCSE/GNVQ point score
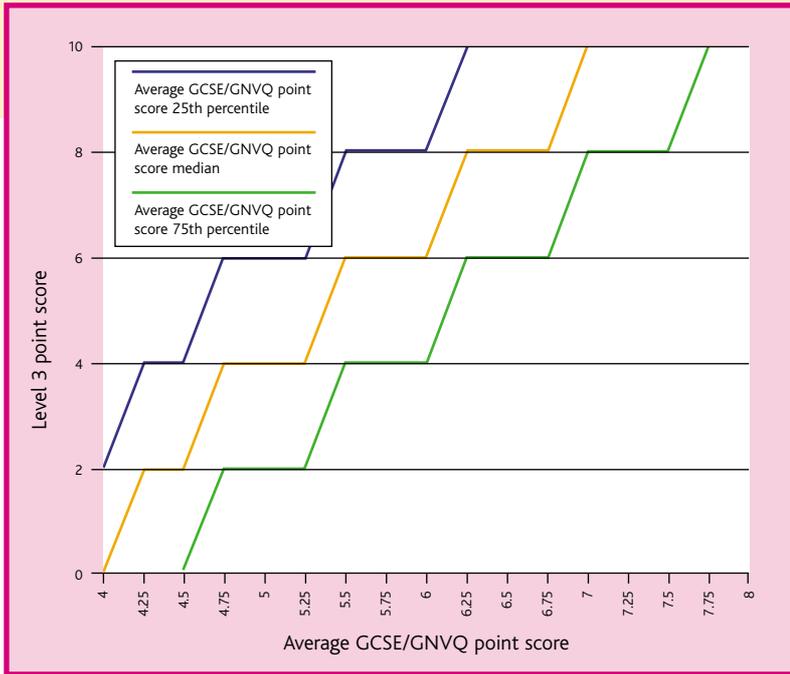
*The DfES also produces subject-specific performance tables and graphs, comparing GCSE entry grades with AS/A-level scores. Graphs and tables for all mainstream A-levels are available on the DfES website. Here is an example:*

A student with average level 2 entry points of 5.0 could reasonably be expected to score 4 points (grade D) in this A-level. A score of 6 points (grade C) would indicate that the student has performed at a level comparable with the top 25% of students whose average level 2 score was also 5.0.

This system is intended to be used by the schools and colleges themselves. Graphs and tables can be downloaded by schools and colleges so that they can tailor the system for their own use. The other main advantages of this system are that:

- awarding bodies provide the DfES with a complete set of annual data which can be used for all calculations

- the system allows for comparison between different types of schools and colleges. (The DfES have published the results of the pilot, comparing the overall value-added scores of schools and colleges, on their website.).

### Links:

**www.dfes.gov.uk/statistics/DB/SBU/b0321/ stvalfin.pdf**

- subject-specific performance tables and charts comparing GCSE entry grades with AS/A-level scores.

**www.dfee.gov.uk/performance/vap_00.htm**

- results and details from the DfES value-added pilot.

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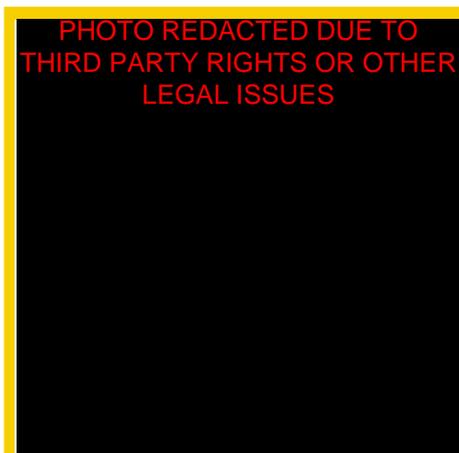
# The A-level Performance System (ALPS)

**Greenhead College's A-level Performance System (ALPS)**

The ALPS system has been developed over the past 15 years at Greenhead Sixth Form College. The college uses the system to monitor year-on-year performance taking account of the abilities of each year group as measured by incoming GCSEs. The value-added scheme is now supported by a comprehensive set of performance indicators for each A-level subject. The benchmark was derived from nearly 20,000 student entries from nine colleges which had outstanding FEFC inspection reports and have featured in the top 20 colleges in government-published league tables. The minimum target grades the data suggest are as follows:

| GCSE score band | Average grade expectation A-level / GNVQ | | Minimum A-level target grades (excluding General Studies) |
|---|---|---|---|
| 7.5 - 8.0 | A | ) GNVQ | AAAA |
| 7.0 -< 7.5 | A | ) Dist. | AAAB |
| 6.7 -< 7.0 | A/B | ) | AAB |
| 6.4 -< 6.7 | B | ) | ABC |
| 6.1 -< 6.4 | B | ) GNVQ | BBC |
| 5.8 -< 6.1 | C | ) Merit | BCD |
| 5.5 -< 5.8 | C | ) | CCD |
| 5.2 -< 5.5 | D | ) GNVQ | CCD |
| 4.0 -< 5.2 | D | ) | CDE |
| 2.5 -< 4.0 | E | ) Pass | EEE |

In addition to providing target grades for students, the ALPS team also give a detailed analysis of each subject which can be used for comparative purposes at subject level. Results for each subject are aggregated and value-added scores for each subject are calculated. The value-added score for each subject may then be compared to the value-added scores of all institutions offering that subject. The ALPS system allows schools and colleges to see whether they have performed above or below the average. It is also possible to compare results with the top and bottom 25% of schools and colleges.

The main advantages of using the ALPS system are:

- the ALPS team provides a comprehensive analysis of the college's performance, with additional information provided at subject and individual level

- the system is based on 15 years of data collection and analysis

- many FE and sixth form colleges use the system.

**Links:**

**www.greenhead.ac.uk/beacon/gc_system/full _report.pdf**

# A-Level Information System (ALIS)

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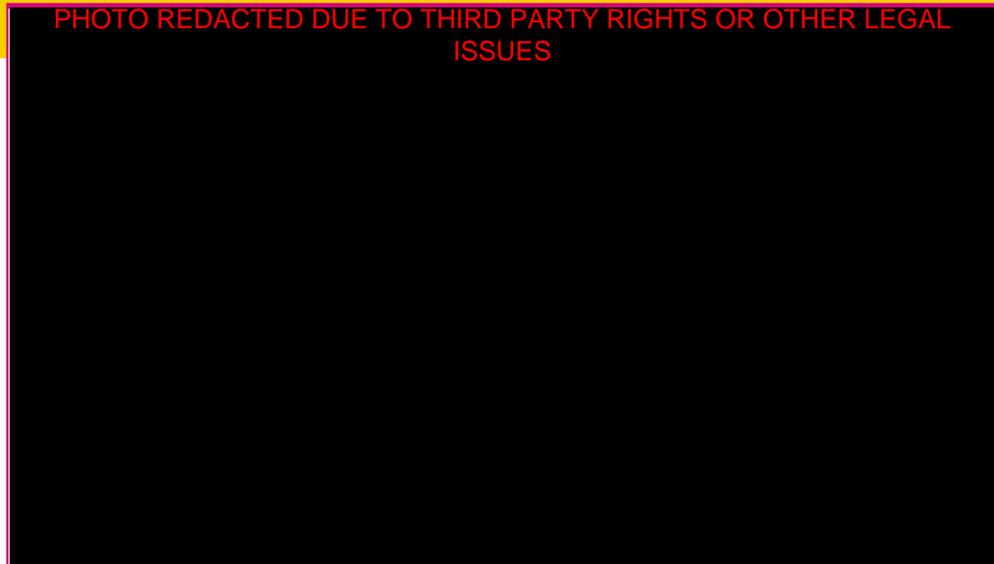
The A-Level Information System was introduced by the Curriculum, Evaluation and Management (CEM) centre at Durham University in 1983 and is now used by over 1,100 schools and colleges. ALIS calculates performance indicators for post-16 students and includes analysis of A-level, AS and advanced GNVQ examinations.

The ALIS project provides printed reports for each school/college, detailing performance at individual, subject and institution level, including:

- graphs of institutional and departmental progress over time

- departmental summary graphs

- chances graphs for each subject

- value-added performance tables for each subject, with schools and colleges identified by a confidential codename and an institution-type indicator.

As well as the average GCSE score (based on all full-course GCSEs taken before sixth-form), ALIS provides an alternative baseline (the Test of Developed Abilities), which can be used for students with no GCSEs.

The ALIS value-added measure (residual) is the difference between the actual grade score achieved and the grade score predicted from the baseline:

*residual = actual grade score – predicted grade score*

Every year, for all the students in the project taking each A-level subject, ALIS plots the students' grade score against their average GCSE score. The best line drawn through the points on the graph provides the predicted grade score associated with a given average GCSE score.

Predicted Grade=(2.44* Average GCSE Score) - 8.58



10
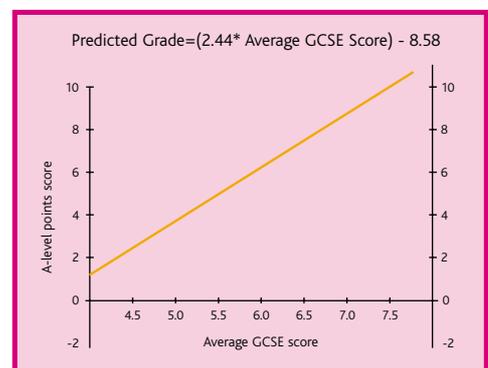
# Chances Graphs

In our example of A-level geography, a student with an average GCSE score of 6.0 would have a predicted score of 6.1 UCAS points, i.e. grade C. If the student achieved a grade B (8 points), then the value-added score would be 8.0 – 6.1 = 1.9.

Each subject, and often each syllabus, is analysed separately because the pattern of results varies substantially from one examination to another. Analysis shows that A-level results differ significantly between subjects, and the ALIS system incorporates these factors when predicting grades. As an additional service, ALIS also incorporates gender differences into its calculations.

For a small fee, the ALIS team provides a full report for each institution, which includes:

- chances and regression graphs for all subjects

- student reports

- subject reports

- summary reports

- charts for institutional and departmental progress over time (statistical process charts).

Below are examples of the chances graphs. These can be used to show the chances of achieving higher than expected grades.
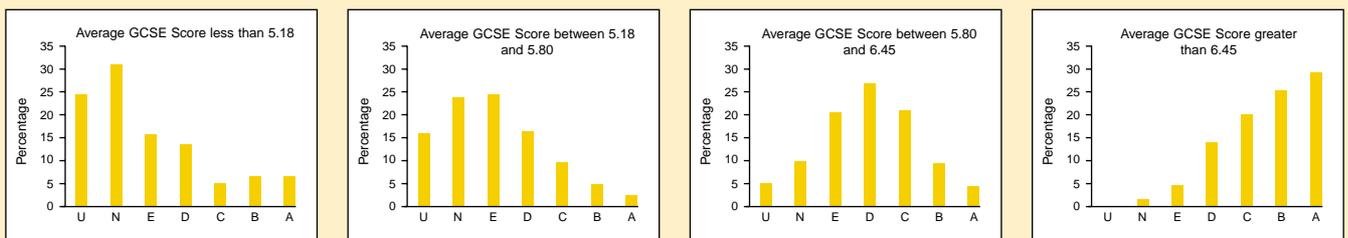


For example, a student whose average GCSE score is 5.9 would most likely pass this subject with a grade D. However there is a 20% chance of a student with this prior attainment passing with a grade C, a 10% chance of passing with a grade B and a 4% chance of passing with a grade A.

The main advantages of the ALIS Project are that:

- the ALIS team provides predictions for each individual subject rather than an overall prediction for each student

- the project has been operating since 1983 and is used by over a thousand schools and colleges

- the ALIS team provides a comprehensive report to each school, with detailed analysis at individual, subject and institutional level.

**Links: www.cem.dur.ac.uk/**

# Comparison of the systems

The example below shows how the DfES, ALPS and ALIS systems compare when predicting level 3 scores for 11 individual students.

| | Average level 2 (GCSE/GNVQ) entry point score | Expected level 3 (A/AS-level/GNVQ) total point score (ALPS) | Expected level 3 (A/AS-level/GNVQ) total point score (DfES) | Expected points and grade per A-level (ALIS)* |
|---|---|---|---|---|
| Student 1 | 5.8 | 14.2 | 16 | 5.6 - C |
| Student 2 | 6.3 | 18.9 | 22 | 6.8 - C |
| Student 3 | 6.1 | 16.6 | 20 | 6.3 - C |
| Student 4 | 5.7 | 14.2 | 16 | 5.3 - C |
| Student 5 | 5.8 | 14.2 | 16 | 5.6 - C |
| Student 6 | 5.7 | 14.2 | 16 | 5.3 - C |
| Student 7 | 6.0 | 16.6 | 18 | 6.1 - C |
| Student 8 | 6.8 | 23.6 | 26 | 8.0 - B |
| Student 9 | 5.0 | 10.2 | 10 | 3.6 - D |
| Student 10 | 7.7 | 32.1 | 38 | 10.0 - A |
| Student 11 | 5.0 | 10.2 | 10 | 3.6 - D |

* ALIS calculations are carried out on a subject basis, using a different formula to predict grades for each subject. The equation used here is for an A-level of average difficulty (geography).

Whilst DfES and ALPS provide subject specific data, they do not provide predictions for individual subjects, preferring to provide students with overall grade predictions.

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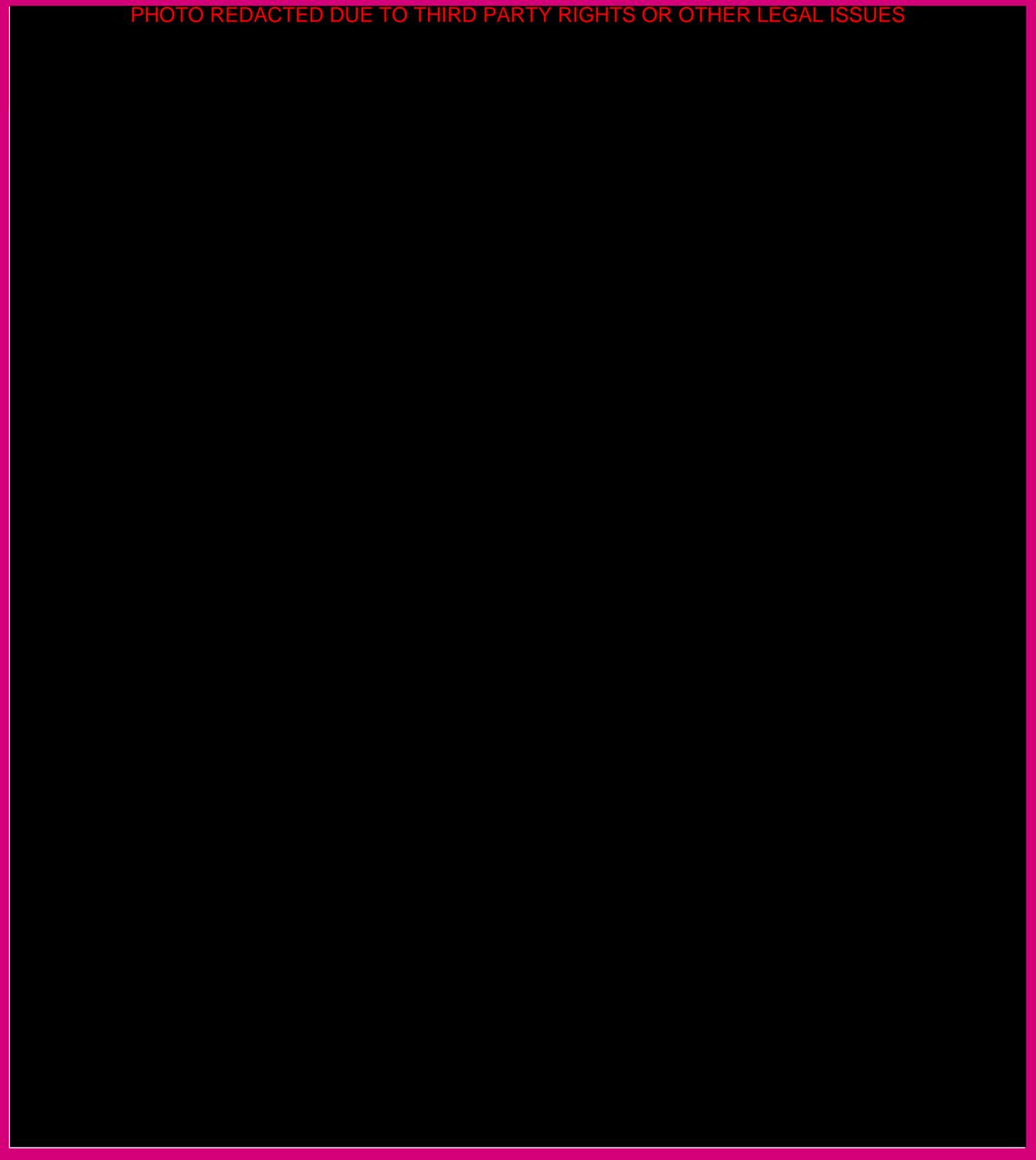
# Annex A – Case Studies

**Case studies of schools and colleges using value-added measures**

There are many schools and colleges whose staff use value-added measures. The case studies included in Annex A resulted from visits made in 2002 to schools and colleges whose retention and achievement rates have either increased or remained consistently high in recent years. These examples show how value-added measures can be used effectively both for target setting and performance management.

**Barnet College**

Barnet College has used the ALIS system for ten years. It has also developed its own in-house target-setting and tracking system for vocational courses, linked to the college management information system. The college has also participated in the DFES post-16 value-added pilot.

The college recruits a broad intake to its A-level provision, although most students are of average or below average attainment. A substantial proportion of students are from minority ethnic groups. The value-added system is introduced to students after induction and is delivered as an integral part of the tutorial process. There is an allowance of one hour per week for tutors to hold tutorials with individual students, in addition to group tutorial time. Minimum target grades are set using ALIS data and these are reviewed in the light of actual performance in October and January.  A feature of the system is that students are asked to maintain their own profile, and they can see at a glance whether they are meeting or exceeding their target. Tutors track overall student performance and involve subject teachers where necessary. Targets are finely tuned in individual tutorials, with tutors drawing on their professional judgement and their knowledge of the student.

Value-added data are an important feature of the self-assessment process which begins each September. Alongside recruitment, retention and attendance rates, staff receive a printout of value-added scores for each subject. In the case of under-performing subjects, a member of the Quality Assurance team is appointed to act as a critical friend. An individualised action plan is drawn up in that subject with the aim of achieving at least an average level of performance. There has been a continuing trend of improvement in value-added scores and the college is now at the upper limit of the average band for value-added. Some departments perform particularly well, with one having a

poorly qualified intake, achieving average outcomes, and so scoring very highly in terms of value-added.

Attitudinal surveys are used to provide students' views on teaching and tutoring. They have also been used as part of an equal opportunities project relating attitudes to performance by gender and ethnicity, and defining support needs for vulnerable groups. The major costs of the system are staff development and the additional loading on personal tutors.

### Chesterfield College

Chesterfield College has been using value-added analysis since 1998. Staff have used a combination of ALIS and an in-house value-added system to set targets for students, for planning and review purposes and as an informal self-assessment tool for staff. The college has a good management information system which they believe is an essential prerequisite for using value-added analysis as a basis for setting targets and monitoring performance.

The staff consider that some A-level qualifications are harder to achieve than others and use this knowledge to help identify which A-levels each student is likely to achieve in light of their average GCSE grade. A 'right course' interview takes place within four weeks of the start of the autumn term to ensure that each student is aware of the demands that they are placing upon themselves and to set minimum target grades for each subject. Many students choose to transfer courses at this early stage. Since the college has started to use the 'right course' interview, the college has found that the number of students withdrawing from the college at half-term during the autumn term has reduced significantly and that the percentage of students successfully completing their courses has increased.

Tutors carry out three interviews each year with individual students. During each review tutors

refer back to the original target grades, and make use of chances graphs in order to help raise expectations and improve their motivation. Students who are achieving above the level predicted are sent a letter from the principal of the college congratulating them on their performance so far.

### Coundon Court School and Community College

Coundon Court has used the ALIS system for eight years, at first on their own initiative and latterly through Coventry LEA. The LEA publishes comparative value-added information aggregated for all subjects for each school in its area.

Coundon Court admits students with a wide range of prior attainment to its sixth form, although few students come from areas of social disadvantage. The school has developed its own formative system to raise student achievements using ALIS data. Once student GCSE results are known staff help students make appropriate subject choices for A-level and AVCE programmes. Students are set a minimum target grade for each subject which they are expected to exceed. There are formal reviews of student progress, the first of which takes place before half-term of the autumn term. Target grades and performance data are incorporated in a value-added profile which is used as the basis for guidance, target setting and action planning at review meetings. The profile also forms the basis of reports to parents. The system allows the early identification of students who are performing particularly well, who are encouraged, and those at risk of under performing. Where students are underperforming, parents are involved in giving support in time management and helping to strengthen motivation.

The data on students are also used to analyse the performance of teaching groups, allowing teachers to check that, for example, both male

and female students are making appropriate progress. Where necessary, action plans are developed to improve performance. Examination outcomes are analysed and value-added scores are calculated for each teaching group. Departments can therefore review their provision and can consider necessary improvement. One department, for example, changed to a more appropriate syllabus and improved teaching methods which has lead to a consistently higher value-added score. Training and support given to staff has won acceptance of the system over time. The main cost of the system is the time taken for data entry and the commitment of senior staff.

## Enfield College

Enfield College has a wide intake of students to its AS and A-level provision, although prior achievement is clustered around the minimum intake level of 5 C grades at GCSE. The college recruits 58% of its full-time students from disadvantaged areas, and students from ethnic minority groups form 45% of the intake. In addition to full time A-level courses, there is a large part-time A-level provision.

The college previously used ALIS to benchmark its performance. Following a successful pilot in 2000-2001 it is now using an in-house system developed from ALPS, largely to strengthen the tutorial system. The students are set a minimum target grade at induction in line with their ALPS predicted grade, although for many students this will be increased to a pass grade. The system is explained to students in detail at induction. Students' progress is tracked and monitored at regular review meetings in October, February and June. Target setting and review is carried out on an individual basis and reviews lead to a report. Reviews are informed by data on students' performance in assignments, attendance and punctuality. Entry targets are revised upwards where students are achieving well. Students who are achieving less well agree an action plan and are given appropriate

support. Tutors also arrange appropriate support activities for their tutorial groups. In the initial pilot project conducted by the college this combination of measures lifted students' overall achievements by a grade above the predicted level in a significant number of cases.

Although using value-added measures is not seen as a quality control measure at this stage, it has prompted quality improvements. Most significant amongst these has been the standardisation of assessment loads and assessment procedures across subjects and the identification of a need to improve guidance on programme choices. The positive outcomes the introduction of the ALPS system generated has helped to win its acceptance by staff and students. Tutors receive a clear briefing in the system and are provided with a comprehensive handbook. Students are given a useful guide to the tutorial and monitoring systems. The costs of the system, including additional tutoring time, are offset by improved retention. The pilot showed that some parents are confused by the difference between the minimum target grade and the predicted grade. Better information for parents, and more opportunity for celebrating students' achievement are planned.

## Greenhead College

Greenhead College has operated a value-added system for 15 years. The success of the system was recognised by the award of the Queen's Anniversary Prize for higher and further education in February 1997. During that time the number of students attending the college grew significantly and the number of students taking GCE A-levels increased from 195 to over 700. During the same period, GCE A-level pass rates rose from 72% to 97%, and the proportion of students achieving A and B grades from 20% to 56%.

The college's tutorial system focuses on the needs of each student. The students attend a seminar on their second day at the college

where value-added is explained, and where the students get to see the performances of the previous students at the college. The performance of the previous students is set as a target to be beaten by this set of students. This is designed to act as a big motivator for the students.

A team of 17 personal tutors, which includes senior managers, is responsible for designing and implementing a programme of weekly tutorials and for offering individual support to students. The involvement of senior staff in this team reflects the high priority accorded to the provision of support. Students have ample opportunities to review their progress with their subject teachers as well as with their personal tutor. Once a term, students have individual interviews with each subject teacher and each student receives a grade that is recorded on a progress report sheet. This enables them to compare their current performance with the potential indicated by their GCSE achievements. Action is taken to support students who are not meeting their predicted grade whilst students who are exceeding their predicted grade are commended. The subsequent discussions between students and their personal tutor motivate those who are performing well and identify those who need extra support. In some cases, individual contracts are drawn up between students and tutors, or extra support sessions are provided. Subject teachers and personal tutors keep each other fully informed about individual students. The value-added system is explained to parents at information evenings. Parents are kept well informed of students' progress at all times through written reports.

### Hills Road Sixth Form College, Cambridge

Hills Road Sixth Form College, Cambridge is an oversubscribed college whose students enter with a minimum GCSE average points score of approximately 5.5. The college has been using value-added analyses as a quality assurance tool since 1992. The college primarily uses ALIS

regression formulae which are used in a performance management system designed specifically for their college. The college also uses ALPS and information from DfES for comparative purposes. The value-added system is used solely for AS and A-levels.

All departments are provided with value-added analyses, alongside other centrally produced performance data, which they compare with previous years. Each department's response to the performance data, including any action arising, is included in its annual report. All performance data, together with the associated departmental reports are open to all college staff. The data is colour-coded to allow quick identification of any weaker areas. Analyses from previous years are used for comparison, and any persistent weaknesses are identified. Departments are supported by two curriculum directors to build on strengths and address weaknesses. For example, lesson observations and discussions with departmental teams has led to a change to a more appropriate syllabus.

Tutors are also encouraged to use value-added analyses when considering target grades, although the College has decided not to share this routinely with students. In November of the first year, tutors are provided with a split target grade (e.g. B/C), based on GCSE results and ALIS models, for each subject taken by their tutees. The process is very much individualised and the associated target grades agreed with students are also based on factors other than this value-added benchmark. Progress against these target grades is discussed in interviews with each teacher twice a year when all lessons are cancelled. The feedback from students is extremely valuable and more than compensates for lost teaching time.

### North Devon College

North Devon College is a tertiary college with high achievement and retention rates. The college has been using ALIS for five years for its A-level provision. With the introduction of Curriculum 2000, the college has extended the use of the system to its AS provision and is now beginning to explore its use with AVCE programmes.

The college has adopted a persuasive and explanatory approach to using value-added measures rather than imposing the system on staff. The system has been explained to members of staff and is considered predominantly as an additional management tool to be used alongside existing tools. The college has used the value-added scores to help identify areas of good practice that have been shared with colleagues through departmental training sessions. The college has not sought to identify any areas of weakness but rather has let staff identify these for themselves by making value-added scores for the entire cohort generally available. These scores are made available by subject and by students. Subject cohorts are broken down to provide details of performance by group, gender and the top 25% and bottom 25% of the cohort. As a result, the college has seen a big improvement in the performance of students in both the top 25% and the bottom 25% of the cohorts. Subject staff have also identified weaknesses which have led to changes in teaching methods and to changes to a more appropriate syllabus.

Tutors at the college are encouraged to use value-added data when discussing anticipated grades with students, and to use chances graphs to motivate the students. The grades are regularly discussed with students, however the tutors do stress that the anticipated grades are not set in stone and are primarily used to judge the progress a student is making. Individual students have responded well to the high expectations of staff when the chances graphs

have indicated that students are under performing.

The value-added system was initially trialled in one section before spreading it to the entire A-level department. Considerable support for subject teams has been provided by the ALIS co-ordinator who has spent considerable time explaining to subject teams both the statistical basis for the system and the ways in which it can best be used. The principal cost to the college of implementing the value-added system has been the time allocated to this member of staff to produce charts and analyses and to present the findings to other members of staff. He is a member of the college middle-management team but is given positive support by members of the senior management team.

### Sir George Monoux College

Sir George Monoux is a sixth form college situated in northeast London, providing A-level and AVCE programmes to 1,500 students. It serves a socially deprived area with large minority ethnic populations. The college has used ALIS for five years to benchmark its A-level performance, and is now using ALIS to help raise levels of achievement

The college intake reflects a wide range of prior attainment but is weighted towards the minimum admission requirement of five C grades at GCSE. 82% of students are from minority ethnic backgrounds and 87% attract funding for widening participation. The college introduced a new strategic plan in 2001 with a central aim of raising achievement and the aspirations of students and staff. The plan includes: "promoting a positive work ethic; developing better engagement with the subject of study; promoting intellectual skills and capabilities; promoting student independence". The success of the plan is measured by value-added scores, rates of progression to higher education and careers, and completion rates. ALIS data are used to evaluate the value-added scores.

Tutors set target grades for students, taking account of initial assessments made during induction and ALIS data. The targets set are above average predicted levels and they are explained to students as aspirations. Student performance is monitored through individual tutorial contact, for which there is a weekly allowance of one hour per tutor group. Reviews of progress take place in October, before the Christmas parents evening, in February, when students at risk are identified, and at the end of the academic year. Reviews trigger action planning and support for individual students which might include help with academic language or lunchtime subject workshops based on individual learning plans. The tutorials are also used to manage student expectations in relation to the four key areas identified in the strategic plan. The major cost is the time spent using ALIS data which has not yet been integrated into a computer-based monitoring system.

ALIS data are used at the end of each year to compare departmental performance, but it is the aim of the college to make the system an integral part of the self-assessment process.

### Slough Grammar School

Slough Grammar School is a selective school which has a strong commitment to equal opportunities. The school serves some socially deprived areas and a large minority ethnic population. The school uses ALIS to measure performance on its AS, A-level and AVCE provision and for quality assurance and target setting.

All staff are trained in how to interpret data and how to use data for performance management. Targets are set for each department and progress against these targets is used to inform on all aspects of teaching. Since the introduction of a value-added system, the school has seen a sustained improvement in examination results. The identification of good practice and the

sharing amongst departments of any good practice have been instrumental in improving standards. Value-added analysis has encouraged teachers to focus more strongly on the underachieving students. Gender analysis has also had a big impact, leading the school to consider the pros and cons of using mixed or single sex classes in some subjects.

Target grades are set for all sixth form students at the beginning of their first term and chances graphs used as part of tutorial discussions. Tutors stress that these are target, not predicted, grades. Students are given a single target grade. These target grades are recorded in teachers' mark books to help teachers identify underachievers early on.

### Woodhouse College

Woodhouse is a sixth form college situated in North London. It has used the ALIS system since 1991, when it joined as a part of the Technical and Vocational Education Initiative (TVEI). The college achieves high A-level results and uses ALIS to check that these results do not conceal any underperformance.

Woodhouse College recruits from a wide area and gains a well-qualified intake, with low recruitment from areas of social deprivation. The majority of the 900 students are following A-level programmes, with 80% of them taking 4 AS levels in their first year. Around 100 students are following AVCE programmes. The ALIS data was used in a relatively informal way, initially to review student achievements and to examine factors such as performance by gender. By 1994, however, the college had started to use benchmark data in a systematic way. Departments were asked to use value-added data in the self-assessment of their quality of teaching. A few departments, where students were achieving good results, were nevertheless recording poor value-added scores. Departmental heads took the lead in improving performance, for example involving examiners,

developing resource and support materials, and changing teaching patterns. The ALIS attitude surveys, which provide basic student perception data, are used as a basis on which to take action to improve facilities and teaching. Whilst average teaching group sizes have increased from 12 to 23 there has been no decrease in the overall achievement of students.

The college has a strong student support and pastoral system. One hour a week is allocated to a pastoral tutorial and one to a subject tutorial. ALIS data are used in tracking and monitoring student achievements, using both in-house systems and PARIS software. Students are set an initial minimum target grade, and progress towards this is reviewed in individual tutorials at set points in October, January and in the summer term. Printouts are available for teaching groups and tutor groups, to enable staff to take appropriate action in providing support. Students who are under performing in two or more subjects are discussed at a case conference (for which an afternoon is allocated at each review point). An action plan is subsequently agreed between the student and the tutor, and progress is reviewed after five weeks. If students are continuing to work below their potential, parents are contacted. The major cost of the system is the time taken to enter data, but as the PARIS system now shares data with the MIS system, the additional requirements have been minimised. The offsetting gain has been to make tutoring contribute to learning more effectively. There was a strong training effort at first to ensure that the tutors understood the procedures, but now new tutors simply require a briefing session. The support of heads of department has been essential in gaining acceptance for the system and the benefits are now clearly established in the college.