OFFICE
FOR STANDARDS
IN EDUCATION

Ofsted

Inspecting Vocational Courses

11–16

with guidance on self-evaluation

From the Office of Her Majesty's Chief Inspector of Schools

Inspecting Vocational Courses

11–16

with guidance on self-evaluation

Office for Standards in Education
Alexandra House
33 Kingsway
London
WC2B 6SE

Telephone 020 7421 6800

Web site: www.ofsted.gov.uk

CONTENTS

INTRODUCTION

This booklet is intended to help school inspectors, headteachers and staff to evaluate vocational courses in secondary schools for pupils pre-16. It complements OFSTED's inspection handbooks and should be read in conjunction with the guidance *Evaluating Educational Inclusion*, published in October 2000.

The booklet gives guidance on the context, inspection issues and evaluation of evidence for vocational courses. You will find advice on what issues to explore, and points to consider when gathering first-hand evidence and information on funding. Inevitably, the scope of a booklet such as this is limited: only some of the facets of vocational courses affecting pre-16 education are featured, and these are in a state of evolution.

The most significant vocational courses in Key Stage 4 numerically are in business education, and information and communication technology (ICT). These were considered in earlier publications in the series: *Inspecting Business Education 11–16* and *Inspecting Information and Communication Technology 11–16*. This present booklet sets out general issues relating to vocational courses and exemplifies these in separate sections on the following subjects:

- art and design Part One GNVQ[1] (and GCSE[2] applied art and design [double award]);
- engineering (and manufacturing) Part One GNVQ (and GCSE engineering [double award]);
- health and social care Part One GNVQ (and GCSE health and social care [double award]);
- leisure and tourism Part One GNVQ (and GCSE leisure and tourism [double award]);
- construction (NVQ[3]).

The general advice in this booklet is illustrated with examples of evidence and evaluations for particular subjects that are italicised and presented in boxes, sometimes with a commentary to give further explanation. These examples show a range of ways in which evidence and findings can be recorded and reported. They are not meant to endorse any particular method or approach.

All the subject guidance booklets can be downloaded from OFSTED's web site (*www.ofsted.gov.uk*).

Our School Inspection Helpline team, on 020 7421 6680, will respond to any queries (or you can e-mail *schoolinspection@ofsted.gov.uk*).

[1] General National Vocational Qualification
[2] General Certificate of Secondary Education
[3] National Vocational Qualification

COMMON REQUIREMENTS

Inspectors or evaluators in schools should have a good understanding of the key characteristics of the school and its pupils. The achievement of individuals and the different groups of pupils in the school must be evaluated to judge how effectively their needs are met. Credit should be given where, against the odds, pupils achieve well even though they may not have reached the levels of attainment expected for their age.

As an evaluator, you must be thoroughly familiar with the specific requirements for vocational courses in the National Curriculum. You will need to consider how successfully the subject contributes to pupils' spiritual, moral, social and cultural development, and how effectively it helps to prepare pupils for adult life in a culturally and ethnically diverse society.

When evaluating vocational courses, you should consider how well planning and teaching take account of the following principles of inclusion:

- setting suitable learning challenges;

- responding to pupils' diverse learning needs;

- overcoming potential barriers to learning and assessment for individuals and groups of pupils;

- promoting racial equality.

You need to be informed about the responsibilities and duties of schools regarding equal opportunities, particularly in respect of discrimination on grounds of gender, race and disability. These are covered by the Sex Discrimination Act 1975, the Race Relations Act 1976, the Race Relations (Amendment) Act 2000, and the Special Educational Needs and Disability Act 2001, and their respective Codes of Practice. These Acts underpin national policies on inclusion, on raising achievement and on the important role schools have in fostering better personal, community and race relations, and in addressing and preventing racism.

In many schools you will find additional resources and initiatives aimed at promoting educational inclusion. You must know about any nationally funded or local initiatives in which the school is involved so that you can assess their effectiveness. [4] There is guidance on this in the OFSTED publication *Inspecting New Developments in the Secondary Curriculum 11–16 with guidance on self-evaluation* (published 2001).

[4] Notably, Education Action Zones, Excellence in Cities, Ethnic Minority and Traveller Achievement Grant (EMTAG), and other programmes funded through the Standards Fund, the Single Regeneration Budget, the New Opportunities Fund and New Deal for Communities

1 WHAT ARE VOCATIONAL COURSES?

This booklet takes vocational courses to be those leading to qualifications that:

- introduce pupils to a broad sector of industry and business;

- encourage understanding of the sector;

- develop capability in skills representative of it.[5]

These include Part One and Full GNVQs, GCSEs in vocational subjects, and NVQs. However, this is a complex area and inspectors are expected to ensure that they keep up to date with recent developments through the various publications and press releases, as they become available from appropriate bodies. It is also worthwhile to check the web sites of the different agencies concerned to obtain the latest information.

1.1 Vocational courses in the curriculum

Schools adopt a variety of approaches to finding space for vocational courses in the curriculum. Time for these courses can be created by use of 'section 363' 'disapplication'. Some schools set aside a double 'option slot' in which all pupils follow either Part One GNVQ or GCSE (vocational subject) course. Others have an arrangement such that, for example, engineering Part One GNVQ or GCSE (vocational subject) takes up the time normally given to design and technology, plus one additional option slot. Science double award GCSE is occasionally reduced to single award, thus liberating time for Part One GNVQ or GCSE (vocational subject), which can then be completed with only one further option slot.

The evaluator may need to consider the effectiveness with which the arrangements are managed and the impact they have on standards. Depending on the approach used by a particular school, inspectors need to be mindful of the extent to which the arrangements:

- retain reasonable breadth and balance and meet the overall needs of individual pupils;

- affect the total GCSE/GNVQ points of pupils and, thereby, the school's average total points score.

Schools have often started up vocational courses in liaison with further education (FE) colleges or other schools which already have the courses under way. Such liaison has been helpful in getting schools started with teaching new courses. Where resources, including teaching capability, are not available in a particular school, pupils sometimes go to FE sites for teaching. However, these arrangements may present difficulties about timetable synchronisation, transport, quality control of teaching and learning, and costs. This may require further exploration.

It is important that when pupils make choices in Year 9 about options in Key Stage 4 (and beyond), they should understand clearly what the options entail. The quality of careers education and guidance in Key Stage 3 is central to successful match of the Key Stage 4 curriculum to pupils' aspirations. This is explained in *Inspecting Careers Education and Guidance pre- and post-16* (OFSTED, 2002). In best practice, pupils in Key Stage 3 have opportunity to sample work similar to that on vocational courses, for instance in business education. (See 'Example PSHE2 in *Inspecting Personal, Social and Health Education 11–16* (OFSTED, 2001.)

1.2 Standards

Confirming the accuracy and consistency of internal assessment of Part One GNVQ, GCSE (vocational subject) and NVQ is a matter for the awarding bodies, which have verifiers or moderators to sample work and determine whether it meets criteria in the specifications. It is not the job of OFSTED inspectors to second-guess this moderating procedure. That said, in order to glean an impression of what is being achieved, it is necessary to appraise the standards evidenced in pupils' portfolios. It is prudent to link analysis of pupils' written work to discussion with those same pupils to ensure, for example, that the work is entirely their own and not plagiarised. Also, if criteria are applied to the letter, some pupils may have met requirements for high grading despite little contact with the industries or businesses associated with the subject. Though, strictly speaking, this is admissible, there is a failure to develop the intended employability standards.

An important consideration in evaluating achievement is the exploration of the proportions of pupils who failed to gain an award. This may be up to 45% with foundation and 25% with intermediate.

---

[5] Definition as used in *Extending work-related learning at Key Stage 4* (OFSTED, June 2001)

1.3   Teaching and learning

Lessons will not always involve extensive whole-class teaching. Pupils will often be working on assignments to be submitted for assessment. They will sometimes be engaged in group work that could involve reporting back to the whole class. On some occasions, pupils will be in work placements, preparing for them, or undertaking follow-up work. The types of lesson that may be seen are considered in the teaching and learning sections for the subjects that follow later in this booklet.

When pupils are working on assignments to meet the specifications of internally assessed units, it is usual for criteria in the specification to be shared with them. Pupils often annotate their work by 'claiming' in the margin to the effect that they believe the piece of work to meet a particular criterion, for instance 'Distinction, criterion 2/D2' with GNVQ. In lessons which take this form, pupils generally work individually, often at computers, supported on a one-to-one basis by the teacher. A common fault, however, is that pupils may be expected to generate work for assessment before there has been adequate teaching to secure effective learning. This sometimes arises when teachers are themselves insecure with their material and feel uncomfortable about a whole-class teaching presentation.

Whatever the format of the lesson, inspectors should evaluate teaching and learning in relation to the usual criteria. In particular, the fitness for purpose of the planned work should be evaluated as the key to teaching effectiveness.

Assessment is a matter for the awarding bodies. However, if pupils are assessed before they are 'ready', or where group work is photocopied and presented as that of individuals who may have contributed little, standards indicated by assessment may be unreliable. Such situations would suggest that the planning of work is not fit for purpose – teaching does not facilitate pupils' demonstration of their true standard.

1.4   Other factors affecting quality

During the 1990s, GNVQs had a very distinctive and complex assessment system. Schools often appointed a 'GNVQ co-ordinator' to manage the development of GNVQs across the range of subjects. This did not, of itself, ensure effective leadership in subjects beyond the co-ordinator's own subject competence. The difficulty was exacerbated by teaching of units within subjects assigned to different teachers, with no one teacher having subject competence across the full range of units. For example, health and social care (H&SC) is sometimes taught by a science specialist and a humanities specialist, neither having a grasp of the entire specification. The legacy of these arrangements has been attenuated leadership and management, such that, in some schools, the courses lack coherence and robust quality control. On the other hand, some courses have been spearheaded by highly competent specialists, some of whom have themselves taken subject-specific qualifications. For example, some teachers of H&SC have degrees in health studies, whilst others have added to an earlier teaching background by taking a degree in sociology. The position, then, is that leadership and management of courses in vocational subjects can be very variable and may affect the quality of provision.

A vocational courses co-ordinator may work in liaison with awarding bodies and their moderators or verifiers. With the advent of GCSE in vocational subjects, this function is essentially the same as that of the school's examination officer. However, unless they are specialists in a subject, they are not in a position to judge subject standards of pupils' work in internal assessment. (In the past, such co-ordinators have sometimes had a hand in judging standards in subjects as diverse as engineering and leisure and tourism [L&T].) The vocational courses co-ordinator may have a wider role in negotiating franchise arrangements with FE colleges, maintaining contact with other providers about off-site provision or establishing new initiatives in work-related learning. Such management should bring coherence and efficiency to the provision and provide support to subject departments. It can be crucial in monitoring deadlines in order to minimise non-completion of course requirements.

Some schools, particularly those with sixth forms, have a vocational courses base-room, with extensive ICT provision. Pupils and students use such a facility for the portfolio work (internal assessment) that has a very central part in course requirements. During Key Stage 4 lessons, it is fairly common for pupils to be sent, for instance, from an engineering workshop to the base-room to research a topic (which may involve taking something from the Internet) or to 'write up an evaluation'. The quality of these facilities and the extent to which a 'work' rather than 'common room' culture pervades the base-room can be strong contributory factors to the standards pupils achieve.

1.5   OFSTED inspection of vocational courses

Inspection of vocational courses should be no less rigorous than that for other courses. Inspectors must, therefore, have an appropriate depth of knowledge in the subjects they are inspecting. Some individuals have suitable backgrounds, qualifications and experience to inspect across several disciplines, but it would be unusual for an individual to be in a position to span the range of all vocational subjects.

A distinction needs to be drawn between the grading standards in the OFSTED inspection of pre-16 and post-compulsory education. In post-compulsory inspection, standards are judged by the expectations of the specification. Thus, if students were on a level 1 course in the sixth form, such as foundation GNVQ in H&SC, and showing work of merit quality, it might

be judged 'above average' (grade 3), as it would be above the average that is usually found on this level 1 course. However, if pupils in Key Stage 4 were showing the same standard on Foundation GNVQ in H&SC, it would be judged 'below average' (grade 5), because it is below the quality expected of the average pupil in the year group. Section 6 has an example where pupils are achieving above average for a level 1 NVQ in construction but, as they are in Key Stage 4, the standards are judged below average for the year group. With GCSEs in vocational subjects, which provide a continuum from grade A*A* to GG and unclassified, standards are judged in just the same way as for any GCSE.

Though vocational courses, at present, generally start in Year 10, the match of these courses to pupils' needs depends on the quality of earlier careers education and guidance. The high non-completion rate with Part One GNVQ in Key Stage 4 has sometimes resulted from pupils not having sufficient prior knowledge about the demands and appropriateness of courses. Evaluation of pupils' progress on courses should be informed by consideration of the quality of the briefing that the pupils received in making their options choices. Outcomes at the end of Key Stage 4 can be appraised in relation to the pupils' attainment at the end of Key Stage 3 using the DfES 'autumn package' of performance data.

During inspections of schools, inspectors can, on the basis of normal courtesies negotiated by the school, follow pupils into FE colleges, training organisations or workplaces. Where pupils on the roll of the school being inspected are educated on the premises of another school and/or by teachers on the establishment of another school, there is an existing statutory right of access for OFSTED inspectors. The Education Bill 2002 will extend this right to FE, training organisations and other places where pupils on the roll of the school are educated.

Earlier mention was made of the impact that double entry for Part One GNVQ and GCSE (for instance in engineering and resistant materials) can have on performance indicators, such as those in the Performance and Assessment (PANDA) report for GCSE/GNVQ total average points scores. Where pupils are 'disapplied' from National Curriculum requirements and follow courses such as NVQs, which at present are not recorded, or follow programmes with no certification, performance indicators might be lower than if these pupils were following GCSEs. Similarly, where pupils work toward a Full GNVQ (4 GCSE equivalent) in the time of 2 GCSEs, resulting performance indicators may give an artificial impression. This may occur where courses are too school- or theory-based, with insufficient time spent off-site in real work situations. It is for registered inspectors to take stock of these issues to determine whether the PANDA indicators give a distorted picture. In such cases, registered inspectors may wish to consider modification, omission or comment on these indicators in the published report, in accordance with the usual rubric.

In the past, published reports for full inspections have sometimes evaluated all GNVQs and NVQs in Part D of the report in a section headed 'Vocational courses'. Sometimes such courses have been reported under the expected subject heading (for example, art and design). In some cases, they have been inspected within subject sections (for instance H&SC within design and technology [D&T], because H&SC is taught by D&T staff). Occasionally, the only reference has been in the curriculum section in Part B of the report.

Where vocational subjects are related to existing report sections, such as science or business education (where inspected), they should be reported within that section. They should be placed under separate subheadings in the same way as for separate modern foreign languages. Other vocational subjects will need to be reported either as separate subject sections, or grouped within a section headed 'Vocational courses'. Registered inspectors will need to decide whether to treat courses individually, or to group them, depending on the proportion of the year group taking them in relation to other reported subjects. Generally speaking, the higher the proportion taking a particular vocational course, the more likely it is to be reported separately. If a vocational course is specified in the contract, it should be reported individually.

The curriculum section in Part B of the report should evaluate coherence of provision and match to pupils' needs (as evidenced, for instance, by their willingness and ability to complete requirements).

2 ART AND DESIGN

The examples that follow are for the hypothetical 'Tibaldi High School'. The art and design (A&D) department is part of a larger faculty, which includes design and technology. Both areas have, hitherto, followed more traditional GCSE routes.

2.1 Initial information

Information is summarised from the pre-inspection forms. In this case, the previous inspection report contained no information on the new course. However, the head of faculty/course leader has provided a position statement on the department and the newly established course. This places the school's thinking and planning in context.

Example AD1: summary of initial information and points to explore, from information provided by the school and the PANDA

- *Characteristics. The school is in a regeneration area. The local authority is spearheading training support for new employers through grants from the European Social Fund. Through its links with the local FE and art colleges, the faculty is keen to develop a vocational course in response to growing employment needs. Through its education and commercial contacts, the Tibaldi A&D department is building up relationships and partnership initiatives. These are mainly with the new printing, design, advertising and ICT-based businesses being created to service the regeneration of the area.*

- *Staffing. The full-time head of faculty is a D&T specialist, and there is a separate (full-time specialist) head of A&D. The faculty is relatively small. There has been a history of staffing and resource problems, which have tended to affect D&T more than A&D. However, the effect has been to restrict option choices in Key Stage 4. Both areas have had relatively small intakes for full GCSE courses. Of the three other teachers shared between A&D and D&T, one resistant materials specialist in D&T also teaches ceramics in A&D throughout the school. One D&T graphics specialist teaches A&D in Key Stage 3. One A&D textiles specialist teaches D&T in Key Stage 3.*

- *Curriculum. Hitherto, GCSE A&D has only been taught to a single options group (mainly girls) by the head of A&D in Years 10 and 11. D&T has met statutory requirements for most through the short-course GCSE route.*

- *ICT. All faculty members have been involved in recent New Opportunities Fund training for ICT. The faculty has ensured it has been fully involved in the school's National Grid for Learning initiatives. Consequently, it has acquired its own network suite, which includes personal computer (PC) and Macintosh (Mac) platforms.*

- *Standards. Broadly average in D&T, according to teacher assessments in Year 9. Whilst gaining higher than average A*-E at GCSE, the A*-C pass rates are within 5% above the national average and have risen in line with the national trend. Standards in A&D have been above average by Year 9 on teacher assessments. Whilst A&D has often been a popular options choice, the possibility of only a single GCSE group has resulted in mainly higher-attaining girls taking the subject. Consequently, A*-A and A*-C pass rates are consistently well above average and rising faster than the national trend over a three-year period. Relative performance indicator figures show D&T just above the school average and A&D as consistently one of the highest-attaining subjects.*

Points to check

- *Are the educational and business contacts having a successful impact on learning and work experience opportunities for the pupils?*

- *What is the nature and extent of the 'resource' problems that are said to affect the faculty?*

- *What is the impact on learning and standards of the relatively new ICT resources?*

Hypothesis

Pupils taking the GCSE courses appear to achieve at least satisfactorily in D&T and well in A&D. The GCSE (V) A&D course appears to be successful in enabling a greater number of pupils in Key Stage 4 to have access to a relevant A&D course. This appears to be addressing a previous gender imbalance between A&D and D&T. Departmental information indicates the Unit 2 'Materials, techniques and technology', and key skills ICT elements, as being particularly attractive to boys. Recent training initiatives appear to have raised A&D teachers' professional interest, confidence, expertise and competence in ICT.

Commentary

From the pre-inspection information, it becomes clear that all teachers within the faculty see vocational GCSE as enabling them to develop an A&D course option with the potential to facilitate a more effective use of their shared and growing

strengths. This appears to be well directed at putting the school in a better position to meet the aspirations of its pupils. It indicates a potentially good approach to educational inclusion. However, a check will be required to see if there are improvements in standards and achievements for boys and if those for girls are maintained.

The favourable relative performance indicator for A&D gives reasonably strong evidence to support the view that achievement has been good on the previous GCSE course. (However, attainment in A&D does not correlate very closely with that in some subjects, so caution is needed.) The range of ability amongst pupils recruited to the new course is broader; good achievement in the past may not necessarily be evident in the new situation.

2.2   Standards and achievement

Aims for the course are set out in the specifications published by the awarding bodies. Particularly pertinent are:

- the exploration of different forms of 2D and 3D visual language and developing an understanding of other people's use of such imagery;

- the development of an understanding of the qualities of a wide range of materials, and the technology and safe use of tools;

- the creation and development of ideas and prototypes to meet project briefs;

- the production and presentation of practical potential solutions to meet a client brief.

It is the job of the verifier or moderator to check the accuracy and consistency of internal assessments on GCSE (V) Units 1 and 2 (and for Units A, B and C of Part One GNVQ). School self-evaluators and OFSTED inspectors should simply seek a general picture of attainment and achievement in work on different units and with different teachers for different groups across the ability range. It is particularly important to compare standards on disparate elements such as the use of 2D visual language and the practical use of 3D materials. What pupils gain from work placements is of considerable importance for their personal development. Spiritual, moral, ethical, social and cultural considerations will impinge on matters, for example, of client need – involving multicultural values; legal constraints – in the copyright of artwork; and ethical considerations – as in advertising work. This is best tackled through direct discussion with the pupils. Examples AD2 to AD4 show how evaluators obtained an impression of attainment and achievement at Tibaldi High School by analysing pupils' work, talking with them and observing activities in lessons.

Example AD2: analysis of Year 11 pupils' work

- *(+) Standard of sketchbook preparation for studies for Unit 1 '2D and 3D visual language' is above average, with well above average elements.*

- *(+) This appears to be a strength of A&D, coupled with good practice for design sheets from D&T.*

- *(+) A&D influence from Key Stage 3 work still retained in some portfolios is enabling pupils to develop greater breadth and range of choices (possibilities for mark band 3 work).*

- *(+) D&T influence from Key Stage 3 grounding is providing depth of study/detail in preparation work – for example, annotations.*

- *(+) Combination of skills/techniques is encouraging creativity and individuality.*

- *(+) Strengths in 2D: use of range of materials/media >> for example, good use of ICT/image manipulation programs for developing/re-drafting work. Also: for example, changes of colour in pupils' scanned designs for textiles and printwork. Good use of pupils' own (digital and 35mm) photography, particularly of local environment, to develop sources of imagery.*

- *(-) Unit 2: 3D work element is more limited in samples provided;*

- *(+) although some good research into designers; and*

- *satisfactory/average for card/clay models/maquettes.*

- *(-) Object-making techniques using resistant materials appear less well developed.*

- *(++) Unit 3: portfolios showing very good links between development of sketchbook/project work and final pieces.*

- *(++) Very good analytical marking/comments throughout by teachers – targeting for improvement.*

- *(+T) The approach, in turn, is obviously encouraging self-evaluation and analysis by pupils (+L).*

- *(+) There is good tracking of work development, analysing what has or has not worked artistically … and why.*

Overall: there is some very good achievement in work for Units 1 and 3, but only satisfactory progress in Unit 2.

[Attainment above average (3)]

Commentary

At an early stage, the relative strengths of the art and of the design and technology influences are indicated. There is a thorough approach to preparation work, a strength of both teaching and learning. However, pupils' notes and evaluations suggest more limited access to workshops and the 'historic' resources problems (indicated in the pre-inspection evidence) may be affecting 3D work and pupils' achievements. This is a potential weakness or key issue for improvement, which will require further investigation.

The analysis of work has catalogued evidence of generally above average attainment, better on Units 1 and 3 than on Unit 2. If the sample of work is representative of the new broad ability range, achievement is good overall, with variation between units as indicated by the variable attainment.

Example AD3: discussions with pupils; full ability range, including special educational needs

- *Evidence for Unit 3 Work: involving a good range of work experience/links with local businesses.*

- *(+) Responsibility is given to pupils to seek out and arrange own contacts/opportunities through business organisation links developed through school's careers work programme (+ for personal development) – for example, Year 11 pupil's work experience with local printer: involved in producing advertising calendar for local services through the district council.*

- *(+) Good involvement by pupil with/in: image creation and use of graphics/design work alongside professional; computer-generated art and digital photography; costing of advertising space with printing firm.*

- *(+) Also good experience through work alongside local council publicity department in visiting potential business clients to attract advertising space sales; good for identification of design needs at source.*

- *(+) Overall: very good appreciation by pupil of demands which can be made by clients and the tact and interpersonal skills necessary to build working relationships (#).*

- *Discussions confirm work sample analysis judgements on Unit 1 standards.*

- *(+) Particularly good/above average understanding from sample pupils of importance of exploration of a variety of starting-points for their work.*

- *(+) Good general knowledge of work and influence of range of artists, craftspeople and designers studied.*

- *(+) Special educational needs: some very good development by one pupil with statement making use of KS3 work/research undertaken on William Morris and arts and crafts movement for printwork designs.*

  - *>> Also making good use/reference to sketchbook ideas to inform GCSE(V) main pieces.*

  - *>> SMSC: indicating continued value of artwork to pupil, and reflecting individual achievement.*

- *Below average pupil making effective use of collage to explore pattern work for prints,*

- *(+) suggesting ICT exploration with pixellation and 'mosaic' effects using Photoshop suggesting further extension into tapestry or embroidery template/pattern design >> where discussion indicates greater personal strengths [starting to target basic mark band 1 work into mark band 2].*

- *(-) However, discussion confirming some problems of access to D&T workshops for 3D resistant materials work, because of timetabling problems and ageing machinery which requires replacement. (+) Good health & safety awareness. (-) Some computer-aided machining (CAM) limitations. (+) Pupils' comments relating to teachers working with them in overcoming problems with 3D indicating very positive teacher/pupil relationships (link indicated with # above).*

Commentary

Work placements are providing the pupils with some very good practical opportunities to work with and alongside professionals. The partnership links forged by the school are proving very valuable in this respect. Pupils have a good understanding of the importance of research and development elements in their work. The level of their knowledge and understanding indicates secure learning. The practical impact of their use of ICT, a pre-inspection question, is starting to be confirmed. The resource problems are also starting to be unpicked; this issue will have to be followed up through the head of faculty/course leader interview. Positive attitudes and relationships are supporting achievement. The evidence of attainment and achievement from this discussion is consistent with the impression from the analysis of work. Attainment is

above average and better on Units 1 and 3. The weak area is Unit 2, which involves aspects of D&T. Achievement is generally good, with variation between units.

Example AD4: lesson observation (Unit 3), Year 10 lesson; 2 groups (of 12 pupils each) working to chosen design briefs, both of which have practical application; 1-hour session

Group 1 context

Pupils involved in designing a web site for a new local art gallery. Their work arising from the visit by local gallery owner to discuss the brief and requirements. This group of pupils has previously met local artists at the gallery to discuss and understand their work.

- *(+) Key skills in ICT are being used well for layout of web pages; literacy elements are also well emphasised by teacher and supported through careful text input by pupils.*

- *(+) Discussion with pupils shows above average technical understanding of web-publishing programs and protocols.*

  - *>> For example, ftp systems for managing and updating etc.; very good practical use during lesson to check on a test site at different screen resolutions (640 x 480 to higher resolution 1280 x 1024) to check impact and 'readability'.*

- *(+) Efficient and very effective use of artwork/image manipulation programs and scanning work.*

  - *>> Pupils showing above average capability in use of PC/Mac operating systems and switching between systems smoothly and easily when need arises; good achievement.*

- *Overall: very good for practical application and use of web-creation programs.*

- *Design/artwork involving: practical logo design; good use of graphics for impact as well as information; good examples of creative thinking.*

- *(+) Subsequent individual artwork sometimes well above average, involving imaginative use of digital photography.*

  - *>> For example, a girl with English as an additional language is fascinated by Hockney's work – producing a wealth of interesting images taken at a local swimming pool. Excellent for potential background wallpaper designs for web pages.*

- *(+) Well above average standards for experimentation elements and pupils' appreciation of their input as enhancing local artists' work.*

  - *>> For example, one boy recognising web-page background as important as choice of mount when 'framing' a work on screen. Subsequent informed discussion by pupils exploring how this can change the 'feeling' and perception of a work of art. Another pupil recognising the potential impact for sales by the gallery. Very good for critical and analytical skills/approaches.*

[Attainment for this group well above average (2)]

Group 2 context

Pupils involved in designing range of street art as part of local community arts project.

- *Group designing an imaginative mosaic pavement (2D and 3D combination work).*

  - *>> Individual pupils' original cartoon/pattern work showing local and multicultural influences.*

For example:

- *good consideration of a 'wheel' theme representing cage wheel from deserted local mineshafts and railway/road wheels from transport systems for coal/local industry;*

- *well-focused personal interest from religious education studies extending theme to Buddhist prayer wheels, St. Catherine's wheel, circular patterns/motifs, and traditional Indian designs; and*

- *good evidence of pupils developing concepts in preparation work with consideration of rotary motion, differential gearing and so on.*

Overall: above average in reflection of art and design (technological) and creative thinking.

Good for practical consideration – for example, of cementing and base layers for mosaic.

Also potential tesserae in stone/marble/glass (different resistant materials) and clay.

Vocational courses

Commentary

What is clear here is that pupils are being given good quality opportunities and choices for their Unit 3 work, which enables them to implement strengths from Units 1 and 2. The majority of pupils in Group 1 are showing a competence which at least meets potential mark band 2 levels. They show practical, imaginative ICT visualisations, which suggest a healthy capacity for potential mark band 3 standards. Group 2 pupils are also showing competence in the range of preparation work, with in-depth thinking by some individuals. Both groups have responded well to the development of ideas, and this represents good achievement. There are good opportunities for the development of pupils' reflective skills through discussion of their own work and that of others. However, whilst Group 1 pupils are clearly implementing their thinking and research in a practical ICT context, those in Group 2 appear to have made slower progress and are not yet working practically with materials. This again raises the potential issue of resources for the practical implementation of the 3D elements. Pupils are collecting, recording and presenting information well from their researches on artists, craftspeople and the work of designers. Their practical making skills will, therefore, require further investigation.

2.3   Teaching and learning

Lessons in A&D will not always involve extensive class teaching by the teacher. There is likely to be a brief focus at the start of lessons to set, review or share important lesson objectives with the pupils. There may be an expectation of a plenary session towards the end of a lesson, where pupils will share their work and learning. At times, there will be practical demonstrations of key skills and techniques. Here the evaluator is able to make direct assessments of the quality of teaching. There may be visiting artists and designers or artists in residence. Evaluators will need to make judgements on the quality of such provision and its contribution to the pupils' learning. However, much of the teaching may well involve individual tutorial work on a one-to-one basis, or small group work. Where pupils are mainly working individually, or in small groups, the evaluator may well get a more reliable picture of standards than teaching. However, there are often good opportunities for the evaluator to hold individual discussions with pupils, particularly about the development of their portfolio and sketchbook work, which provide the chance to evaluate learning. Whatever form the lesson takes, teaching and learning should be judged against the *Handbook* criteria. It will be rare for there to be insufficient evidence to grade teaching in a lesson. The evaluator should, for example, find evidence for planning, teaching strategies, assessment, challenge and expectations of pupils, and approaches to inclusion, even when a lesson is based on individual tutorial work.

Examples AD5 and AD6 are for teaching and learning at Tibaldi High School. In these lessons, teaching and learning are of the same quality. Occasionally, the quality of learning differs from that of teaching. Such an instance is example HS6 in this booklet.

Very good group discussion shows effective learning and achievement through debate concerning the relative merits of formal elements of potential pieces for exhibition. The context allows pupils to show very good awareness of the visual dynamics of 2D and 3D pieces. There is good low-key monitoring and questioning of pupils by the teacher, supporting and encouraging the self-motivated pace of discussion and challenging pupils with respect to critical and analytical thinking.

The group presentations are very well organised by the pupils themselves. There is a good, co-operative independent learning approach with all involved, fulfilling course requirements well for oral presentations (semi-formal basis). There is effective and appropriate use of work to illustrate choices; a good range of media is employed, with professional use of whiteboard and overhead projector by pupils in the process. Presentations show the significant impact of research, including cultural influences (reflecting provision for SMSC). There is effective intervention and summarising by the teacher, supporting and valuing pupils' work, whilst at the same time promoting and assessing pupils' understanding of their own learning. Evaluations are well related to marking criteria.

Group analysis and evaluation lead to open debate. There is little need for the teacher's intervention, as pupils show well-developed critical and analytical approaches. However, some three or four pupils with literacy difficulties are not yet fully using the expected technical vocabulary. A sensitive approach by teacher, through interventions, promotes language development and use. Overall, there is very good opportunity for pupils' self-evaluation of progress made and to set targets for development – for example, pupils themselves identify the need to develop 3D work because outcomes are not yet as successful as in 2D.

The plenary session shows good extension and challenge by the teacher through emphasis on common elements in pupils' work and getting them to think hard in considering a name or title for their exhibition. There is also consideration of potential problems and issues arising from the presentation of 2D and 3D together. The teacher is effective in leading a brainstorm to explore how best to use the range of tools and machinery available, particularly with metal and plastics (cutting and joining skills): good problem solving. A final challenge thrown in 'in passing', on the bell at the end: consideration of an ICT presentation to record and introduce work at the exhibition. This is very encouraging of pupils' forward thinking for the next lesson, sparking their enthusiasm.

[Teaching and learning very good (2)]

Commentary

This is a consistently good lesson with no significant weaknesses, which gradually builds up to a judgement of very good teaching and learning overall. Teaching style and pupils' expectations ensure that all are included in the opportunities for learning. The lesson demonstrates an effective teaching and learning partnership. Time is well managed, which enables pupils to make good progress. Expectations are high and suitable challenges are set throughout the lesson. This supports learning very well, as it keeps pupils thinking and reflecting on issues and the impact of their work. Pupils are encouraged to explore the personal nature of their artwork and the response it may invoke in the potential visitors to their planned exhibition. Pupils are being enabled to 'see' their work for what it is and appreciate the effect it may have on others. This provides very good opportunities for personal development as well as critical and analytical appreciation. The pupils are gaining confidence in artistic risk taking, as well as in oral presentation. This lesson confirms the strengths in preparation work, and consequent range of choices the pupils are providing themselves with, as outlined in AD2 to 4. The brainstorm on work with resistant materials also strengthens the emerging judgements on resources.

Example AD6: lesson observation of Year 11 class of 16 pupils using workshop; first hour of double period observed

Context

Unit 2 'Materials, techniques and technology'. Focus on making skills: the use of materials to suit purposes and intentions. Individual project work/realisations. Individual tutorial work with pupils.

Teaching initially sound in its encouragement of exploratory techniques and methods.

Followed by: sound direct monitoring/tutorial work on skills/techniques.

Good focus on evaluative open questioning by teacher for assessment purposes.

Learning: good through use of preparation work in sketchbooks and design sheets to inform test pieces and models.

>> Satisfactory reflection on learning supported by oral and written evaluations/progress 'diaries';

>> and in making suitably close connections with contextual studies .

Teaching provision of a satisfactory range of appropriate media and materials to support learning experimentation.

(-) Accommodation: working environment of workshop not as welcoming as art rooms; also more limited display of pupils' work.

Teacher (and observation) focus on two small groups of 4 pupils, as follows.

Group (a): sculpture work

Experimentation with maquettes in wire and plastics (for work on 'wheel' theme).

Sound practical evidence for learning of various techniques: for example, vacuum forming; cutting; joining. Questioning/discussion indicating satisfactory consideration of health and safety issues.

Sound soldering of wire model wheel spokes; pupils consider welding for larger scale (but potential learning of additional skill restricted by lack of working equipment).

Three of four pupils showing need to undertake more background research into sources.

(+) Teacher suggesting further possibilities involving work of Giacometti (for example, wire figures) and Naum Gabo (sculpture in plastics), indicating basically good subject knowledge.

(-) >> However, missing clear references in one pupil's sketchbook notes showing Internet research on Calder (American engineer: motorised sculptures) and Tinguley (Swiss sculptor: use of movement).

Group (b) printing work

Experimenting with intaglio printing using different types of printing ink(s).

Use of printing press in adjoining art room; new learning experience for pupils concerned. Sound awareness of health and safety issues through teacher's satisfactory, straightforward, practical demonstration of press and questioning to ensure understanding; supporting pupils well as they work the press for the first time.

Satisfactory for initial learning by pupils in the development of a series of prints exploiting differences in the finish of each individual print.

Also satisfactory portfolio evidence for range of relief printing techniques – for example, basic lino-cuts.

>> Starting to extend satisfactorily with resistant materials: for example, wood block.

Through sketchbook research by pupils, identification of further possible experimentation – for example, with engraving.

>> Ideas:

use of copper plate;

line, dry point, etching techniques;

study of stipple, mezzotint, aquatint.

>> Also:

Internet research on etchings/aquatint leading to Goya's work;

plus line engraving leading to Dürer;

and soft-ground etching leading to Rembrandt;

photographic etching leading to Corot.

(-) However: lacking practical resources to explore in more than theory, thus affecting learning potential.

[Teaching and learning satisfactory (4)]

Commentary

Teaching is satisfactory and practical workshop experience and demonstrations enable the pupils to develop appropriate skills. However, at times there is a lack of awareness and appreciation of the depth and extent of the pupils' research and preparation work. To a certain extent, the pupils are ahead of the teacher in this respect and the teaching limitations are in danger of putting a brake on some learning opportunities and follow-up work. Further issues supporting the judgement that resources are limiting some aspects of Unit 2 work are revealed here.

2.4   Other information

Evaluation should not dwell on aspects of curriculum, staffing, accommodation, resources or management unless they significantly affect what is being achieved. In this case, the resources for elements of Unit 2 work emerge as a thread throughout. Example AD7 summarises the relevant features that were explored with the course leader at Tibaldi High School.

Example AD7: summary of evidence from discussion with the course leader

- *Whilst the department has recently received additional funding to build up its ICT resources, this has been through additional grant funding. The capital funding to upgrade necessary machinery and resources has been slower because of rebuilding plans. The necessary thinking for improvement has been reflected in the faculty's development planning over the last three years at least. The resource weaknesses figure in the faculty's annual reviews of performance as a target for improvement.*

- *Internal assessments confirm the above average standards in Units 1 and 3 for the current Year 11 pupils. To a certain extent, the more average standards in Unit 2 work on materials is being compensated by the use of ICT. There are growing strengths in computer-aided design (CAD) work and in the use of reprographics and digital photography, of which the department is justifiably proud.*

The opportunities provided by the new GCSE(V) A&D course are proving stimulating for the staff, who are now working more co-operatively as a faculty than they did with the separate A&D and D&T courses. The teachers are happy with their brief and feel that the links with business and commerce, as seen in the Unit 3 work, are playing a major part in motivating pupils and stimulating achievement.

Commentary

There is evidence from records, and through the discussion, of good analysis and understanding of the faculty's strengths and weaknesses. There has been good management, team building and forward planning. This has resulted in appropriate curriculum development and the establishment of the new course. The faculty has been forward thinking and taken its opportunities well – for example, in the development of ICT. Other resource matters are not necessarily, and entirely, in the hands of the faculty; this is likely to be a broader, whole-school management issue. Monitoring and assessment are effective and there is good capacity for improvement.

2.5   Summary

It is important that the staff and senior managers at the school are told exactly how things stand and why. They need to know how and where improvements can be made. At Tibaldi High School, it is clear that inherited weaknesses in design and technology resources and workshop provision are well understood. The evaluation is able to confirm this and reassure the school about the direction of its planning. This calls for an open and straightforward discussion. However, the difficulties need not be over-emphasised in the written report. For oral or written reporting, example AD8 indicates a summary of what needs to be celebrated and explained.

Example AD8: summary of judgements on art and design at Tibaldi High School

The quality of provision in art and design is good. This vocational course in applied art and design has been introduced since the last inspection.

Strengths

- *Overall above average standards.*

- *Pupils' good response to the new course and their good achievement. Enthusiastic response of pupils with special educational needs and those with English as an additional language.*

- *Overall good teaching, with some very good teaching, particularly in Units 1 and 3.*

- *Links developed with local businesses and use made of such opportunities to make learning relevant.*

- *Breadth and depth of foundation and preparation work, exemplified through the use of sketchbooks.*

- *Development and use of ICT for pupils' research and as a working tool.*

- *Curriculum development to support the new course, including opportunities for cross-curricular links.*

Area for improvement

- *Resources to support 3D work and manufacture, to improve opportunities and standards in Unit 2 resistant materials work.*

3 ENGINEERING (AND MANUFACTURING)

The examples that follow are for the hypothetical Armstrong Higgs High School, where a course in engineering has been provided for several years. As in most schools, Units 1, 2 and 3 are taught concurrently (external assessment in Unit 3 only). [Unit 3 is common with manufacturing and there is a good deal of overlap between engineering and manufacturing in the other units. The following examples EG2 to EG6 would apply equally well to manufacturing.]

3.1 Initial information

Information is summarised from the pre-inspection forms. In this case, the report of the previous inspection, only two years earlier, gives a brief evaluation of provision in engineering at that time. The head of design and technology has provided some additional analysis of course outcomes and staffing arrangements.

Example EG1: summary of initial information and points to explore

Summary of information

- *The previous report said that Part One GNVQ engineering was taught to a mixed ability group of about 20, with about half on the Intermediate specification and others attempting some or all Foundation units. Intermediate candidates had a higher pass rate, with more at merit and distinction than nationally. Only two pupils gained a three-unit pass in Foundation and there were no higher grades. Work in lessons showed a similar picture.*

- *The most recent results have shown a continued above average pattern in comparison with national results for Intermediate. Foundation results are better than they previously were, but this is explained as partly because the least able boys are no longer encouraged to opt for the course. Pupils' point scores for engineering Intermediate are about half a grade better than their average point score across other subjects they took. The opposite is the case with Foundation.*

- *The PANDA shows that the percentage of pupils gaining 5+ A*-C grades is rated B against all schools and C against similar schools (C and D respectively at the last inspection). The percentage of pupils gaining 1+ A*-G grade is rated D against all schools and E against similar schools (E and E* respectively at the last inspection).*

- *Teaching has been mainly by the second in department, who was appointed, at the outset of this and an advanced course, from a sixth-form college. Teaching in Year 10 with GCSE(V) is now shared with another teacher.*

Points to check

- *Whether recruitment to the course unreasonably excludes low attainers.*

- *The rationale for the change in staffing.*

Hypotheses

- *Higher attainers do significantly better than in their other subjects, whilst the 5+ A*-C rate is average compared to similar schools. Their achievement in engineering is probably good.*

- *Low attainers seem to underachieve in the school generally and even more so in engineering.*

- *Standards in engineering are improving in line with improvements in the school in general.*

Commentary

The main picture is that higher attainers do well and lower attainers do not. What has the department done to rectify this? Recruitment of the weakest boys has been curtailed as damage limitation. How has the teaching produced these outcomes and why has staffing been changed? In what way has the school's drive to raise standards affected the way engineering is taught?

3.2   Standards and achievement

Aims for the course are set out in the specifications published by the awarding bodies. Particularly pertinent are:

- meeting the requirements of the national curriculum programme of study at Key Stage 4 for design and technology;

- developing a broad knowledge and understanding of the engineering (manufacturing) industry, its organisation, products and processes through investigations, research and practical application.

It is the job of the moderator or verifier to check the accuracy and consistency of internal assessment on Units 1 and 2 (and for units A, B and C of Part One GNVQ). School self-evaluators and OFSTED inspectors should simply seek a general picture of attainment and achievement in work on different units and with different teachers for different groups across the ability range. It is particularly important to compare standards on disparate elements such as electronics and graphics. What pupils gain from work placements is of considerable importance. Where possible, this should be explored by visiting the placement to talk with pupils as they work. It is worth checking that centres are using the appropriate grading criteria laid out in the correct specifications. It is unlikely that centres will be adhering to national standards if they are either ignoring the specified criteria, using centre-devised ones or relying on work based on previous specifications. Examples EG2, 3 and 4 show how evaluators obtained an impression of attainment and achievement at Armstrong Higgs High School by talking with pupils whilst looking at their work and observing activities in a lesson.

Example EG2: discussion with two high attaining Year 11 pupils about their study of refinements in washing machine motor switching, with demonstration of their work

They know that relays are electromagnetic switches that use small currents to switch large currents on or off. They have used prototype breadboard appropriately to assemble a one-transistor relay driver system that reverses relay contacts (and hence toy motor rotation) when the base of the transistor is shorted to the positive rail by a toggle switch. They quickly modify the breadboard to demonstrate the same effect by adjustment of a variable resistor in a potential divider. They can explain the change in base-emitter voltage. They know that a diode should be connected in parallel with the relay to protect the transistor, but cannot explain the direction of connection in terms of Lenz's law and the relay coil (also unfamiliar with the term 'shunt'). They know that use of a relay to switch a motor that is in motion causes 'wear' but are unsure of the reason. They have built in a transistorised motor control circuit with two inputs switching transistors, each of which is followed by a 'class B' twin transistor output stage. They can use the circuit diagram to describe the series of 'switching' operations of the six transistors. They explain that each of the matched NPN and PNP transistors is a Darlington, with very high current gain, so the low current control circuit can supply enough current for the motor. They can explain that resistors are for limiting current and that capacitors are for removing voltage spikes. They know that, in principle, such circuitry can be incorporated in integrated circuits and that an ac version would be possible. They explain clearly how they converted the circuit diagram to a stripboard circuit, using ICT software to check layout and to identify likely voltages across parts of the circuit. Soldering is very competent; they explain proper use of goggles, avoidance of flux fume, the use of aluminium foil as a 'heat sink' when attaching semiconductor components, and how they used a multimeter to check for 'dry' joints. They can use the example of switching refinements to explain convincingly how advancing technology has improved the reliability of domestic and industrial appliances.

[Attainment well above average (2)]

Commentary

This discussion has focused on a very narrow aspect of work (within Units 2 and 3 for GNVQ Intermediate and for GCSE(V)). However, they have a good general appreciation of switching problems and the need to improve reliability. They show a well above average knowledge of transistor switching, the Darlington modification and associated circuitry. They are less secure on electromagnetic induction and the effect of a back electro-motive force. Their practical skills are well above average. The impressive standard on this aspect of the work does not necessarily suggest a similar standard across a wider range of work. The project has covered a section of the specification well: by refining the single transistor switch with use of the 'class B' output stages, pupils have gained an appreciation of design considerations for integrated circuits, rather than simply using them 'off the shelf'. These pupils are self-motivated; they are taking initiative and are working with considerable confidence. They are certainly achieving well, possibly very well, across a range of theoretical understanding and practical skills.

Example EG3: talking with Year 11 pupils of average and below average attainment on placement in a light engineering works (observed with the agreement of the works manager)

Average pupil

Can explain how the elevation, plan and end view in a third angle orthographic projection drawing relate to a sample of the actual component. However, she is confused about line priority, particularly where a visible edge coincides with a centre line or hidden detail. She recognises that the scale 2:1 means that the drawing is twice the size of the component. She is aware of the

convention for drawing a screw thread but is unfamiliar with a specification such as M25 x 35. She shows average capability in interpreting general arrangement drawings. She has the task of facing off aluminium discs on a centre lathe. When observed, she uses a three-jaw chuck deftly to clamp the work for machining and feeds in the facing tool competently along the cross slide. However, a few of the pieces she has already worked look as though the discs were not properly seated in the chuck. She explains that this was due to use of external rather than internal jaws. She shows average but rapidly developing skills in use of the lathe for this basic operation. She has identified the cause of a fault and has self-corrected: good achievement in practical problem solving.

[Attainment average (4)]

Below average pupil

Is using a pillar drill to bore through-holes in mild steel bars. Hole locations have been scribed and centre punched for him. He is using a mounted machine vice and supporting the work on packing pieces. He is not attentive enough to positioning, so that some holes are located a millimetre or two adrift from the marked centres. He is aware of this and is keen to ask how to get it right. Some holes, though correct on the upper surface, are incorrect on the lower surface. He has not noticed this effect, which is apparently due to a muddle with packing pieces of slightly different thickness. He says that he has used a pillar drill several times at school. The boy is keen to learn, but he is not achieving well enough on basic practical skills. This is due partly to lack of supervision during the placement and also to omissions in instruction at school.

[Attainment below average (5)]

Commentary

These pupils are engaged on low-level tasks. Moreover, there appears to be a need for the evaluator to check on supervision and health and safety arrangements. The average pupil has a reasonable knowledge of general arrangement diagrams, but her confusion about line priority suggests that she has had limited experience of interpreting drawings made by others. She has a good generalised skill in quality checking practical work. The below average pupil lacks this skill and it appears to have been an omission in general working practice at school. He has not established a technique for correctly locating a piece of work for drilling and this has not been picked up at school or by his placement supervisor. Taking together these with the above average pupils in example EG2, the above average are achieving well as a result of stimulating opportunities that have been provided; knowledge and skill deficits with average and lower ability pupils have not been identified and tackled effectively. The emerging evidence on attainment and achievement raises questions about the effectiveness of teaching.

Example EG4: standards in computer-aided design (CAD); Year 10 lesson at an early stage in using ProDESKTOP; 22 pupils, 1 hour

Context

Pupils have had a demonstration of basic functions and have practised drawing cuboids with face and edge features such as cones, holes and radiused edges. Now they are working in pairs (of similar ability) to design cycle repair stands.

Pupils build on baseplate, setting suitable constraints for height and width and extruding to a suitable depth. This shows competence in skills covered in earlier work. Pupils have different designs in mind: double leg with retractable pin or single leg with fixed pin. About half the groups need help with the 'select face – new sketch' routine to build on the baseplate. The three most proficient pairs quickly select rectangular, circular or oval base shapes of plausible dimensions and extrude. The most ambitious pair successfully uses the spline function to modify the base-shape. These pupils, who are making good headway, rotate the drawing, using the arrow keys, to see if they like what they have done. Five groups can repeat building on an existing face to produce another leg or a pin on a leg; others need help. Few are competent in producing a matching leg. Having produced a reasonable design, the three fast groups rotate the image and click through elevation/plan/side view, deciding on modifications such as re-siting the pin or extending the leg. Two groups remember the 'select feature – drag' routine to re-site. Two other pupils take a look at what these are doing and sort themselves out.

The least proficient three groups need help with every move. For example, having been shown how to alter the extrusion distance for a leg, they are stuck until told to 'update document'. No groups are making notes of routines as they go. Weaker groups, realising the need for holes in the legs, are again stuck on the 'select face' procedure. Meanwhile, with encouragement from the teacher, the most competent three groups are applying chamfers to selected edges, producing holes for the pin and viewing their rotating creation in transparent and wire-frame mode and in various colours. One group adds a flange to the end of a fixed pin. Two groups are speculating about materials, shaping and joining methods and ways of making the structure demountable for storage. The most capable third of pupils are becoming skilled enough to 'teach themselves' and their conversation testifies to mishaps and successes as they go. They have mastered skills that are within the range of the task. These pupils have thrived in lessons with CAD, where they have been given free rein. They are now achieving well. Less confident pupils are very dependent on their teacher and there is no evidence that they are noting or retaining the tips they seek, so it is unlikely that they could reproduce their work, still less produce a modification of it.

[Attainment average (4)]

Commentary

There is a wide spread of attainment: the higher attainers have mastered the skills quickly, the lower attainers have secured little, though they have persevered through the program with support from the teacher. Overall, attainment is average, but the implications of the wide spread need to be considered. There is some similarity with what was found in talking with pupils and looking at their work on placement. The opportunities provided are promoting high achievement amongst the higher attainers. However, the generic weaknesses of the lower attainers are not being attended to, nor is their learning being secured, for example, by note-making. Lower attainers are not achieving as well as they could. This difference in achievement reflects on teaching methods.

3.3   Teaching and learning

Lessons in engineering or manufacturing will not always include extensive 'teaching' by the teacher. Pupils will often be in the workshop with projects under way. They may be assembling a portfolio of planning and evaluation to meet the requirements of coursework assessment. When lessons are of this kind, evaluators may get a more reliable picture of standards than of teaching. On some occasions, a neighbourhood engineer, works manager, or other professional may visit to talk with the pupils. Such sessions can be observed and evaluated as for any other provision. Where pupils as a class, in small groups, or individually, are visiting an engineering or manufacturing undertaking, evaluators are usually made very welcome. The department can generally contact the undertaking to make arrangements. Some schools have a mini-enterprise scheme coupled to the vocational course and pupils' involvement in this, for example at lunchtime, can be a significant learning experience.

Whatever the format of the lesson, teaching and learning should be judged against the criteria in the *Handbook*. For instance, has a visitor been suitably briefed to give a talk pitched at the right level (effective planning; good subject knowledge; suitable methods)? When pupils are working individually or in groups on a continuing project, do teachers assess how well they are getting on and set high expectations? Where, unusually, there is insufficient evidence to grade teaching in that lesson reliably, a grade might not be given for teaching in the lesson. Nonetheless, an impression might be formed of how effective teaching has been over a longer period of time.

There are two possible weaknesses to be aware of. Teaching may give insufficient attention in content and style to the specification for the vocational qualification. Moreover, there may be insufficient focus on 'state of the art' technological innovation (sometimes through the teachers' own limitations). The other potential weakness is that written coursework sometimes sits uneasily alongside practical activity and has the feel of being cobbled together after the event. Coursework often suggests a standard less impressive than the practical work itself and the presentations pupils can give orally. This is particularly the case for those who are low attainers in literacy and do not do themselves justice in assessed submissions.

Examples EG5 and 6 are for teaching and learning at Armstrong Higgs High School. In these lessons, teaching and learning are of the same quality. Occasionally the quality of learning differs from that of teaching. Such an instance is Example HS6 in this booklet.

Example EG5: Year 10, computer-aided manufacture (CAM); 1 hour

Context. 18 pupils working in two groups on projects associated with workplace-related tasks. One group is designing and making a die for injection moulding of plastic watchstraps, which are then fitted with standard digital watch units. They are using the school's computer-controlled milling machine to cut aluminium alloy plate. The other group has been working with a company improving the design for manufacture of the components of waveguides. They are currently working on small brass elements that are to be turned on the school's computer-controlled lathe. The teacher is supported by an experienced technician who has attended all training sessions provided by the supplier of the CAM machines. He has been fully briefed on the objectives for the session and has prepared materials, tools and samples.

The teacher starts the lesson with a lively question and answer session to recap on the design specification for each of the tasks, drawing out from the pupils the similarities and differences between the tasks. The pupils identify which machines will be used for each task and can say why – round forms with the lathe and more complex forms with the milling machine. When in Key Stage 3, the pupils used the milling machine to cut acrylic sheet and they remember some difficulties with overheating of the cutting tool. The teacher skilfully builds on this to raise the likely implications of cutting metal. Questions are targeted according to the abilities of the pupils and always encourage them to speculate about the consequences of their decisions; responses show very good understanding. Excellent use is made of examples of machined elements produced by previous pupils – both successfully produced items and scrap pieces ruined by machining failures. Each group, subdivided into threes, has to speculate on the causes of failure, form a hypothesis and justify it. They are able to apply their knowledge very well to interpretation of damage features.

Following this introduction, the teacher requires the pupils to work in groups, referring to their CAD drawings, to identify which dimensions are critical for the successful operation and fit of each element with mating components. The groups then have to explain to each other their thinking and are, in turn, again challenged to justify their decisions. They work out the likely order of

---

Vocational courses

machining elements. This shows that pupils are becoming very aware of issues and have an appropriate engineering vocabulary to share them. The teacher skilfully covers the issues associated with the advantages and disadvantages of using CADCAM for production – incidentally, and from direct example as the lesson progresses.

The teacher is well aware of the common mistakes made by pupils – for example, forgetting to take the tool radius into account when planning cutting paths on the milling machine, and not taking account of the shape of the lathe tool when planning shoulders on the lathe. He has prepared large models of cutters to make explanations more easily understood. He then demonstrates how the machine software is used to program the toolpaths and how toolpath verification is used to check feasibility.

Very good use is made of a series of handouts to structure the work and provide reminders of sequences. The emphasis is always on understanding rather than 'keystroke by keystroke' blind instruction. The most able pupils are challenged to respond to frequent – 'What would happen if … ?' questions.

By the end of the session, all the groups have planned their production and have been able to run the speeded-up machining sequence for their own version of the products.

[Teaching and learning very good (2)]

Commentary

This lesson makes use of CAM in the context of purposeful project work. Technical support has been well briefed and this has contributed to the effective resourcing of the lesson. The work builds on pupils' earlier experience with acrylic sheet. Well-conceived use of spoiled components challenges pupils to infer causes from visible effects; it promotes an understanding that anticipates potential problems in relation to pupils' CAD drawings. There is very effective and well-resourced demonstration and timely intervention as the lesson proceeds. All this leads to very good learning, as indicated by the high level of competence apparent at the end of the session.

Example EG6: Year 11 lesson on liquid crystals, thermochromic dyes and new technology (Units 1, 2 and 3); 1 hour

Teaching	Learning
Teacher captures interest by painting signs on filter paper with a thermochromic dye: 'hot dog' etc and warming to give colour changes.	*Attentive. Pupils begin to see the scope of the effect.*
Explains that liquid crystal (LC) materials have long molecules, with ends polarised like a bar magnet. So, between true liquid and true crystal states, they can line up end to end parallel to one another. Hence they form sheets of molecules that associate in layers, and reflected light has a wavelength proportional to the thickness of these. The separation changes with temperature. Overhead transparencies are accurate and helpful to a point. They include stoichiometric formulae and the helical laminar structure of the cholesteric phase: more suitable for a sixth-form group.	*Some pupils' attention wanders: looking out of the window etc. A high attaining pupil asks if there is similarity with colours from oil on a puddle, or in 'shot silk'; teacher acknowledges point as correctly linking with thin layers and angles of light.*
Finally explains that in more fluid (nematic) LC, orientation of molecules can be changed by a small voltage, so changing their effect on light; hence their use to display information.	*Pupils look puzzled; one asks if this is connected with crystal watches and 'crystal-set' radios. Teacher says yes to oscillating quartz crystals to keep time, but that 'crystals' in radios were early diodes: pupil looks more confused.*
Teacher asks pupils to work in pairs to speculate about use of cholesteric LC to: monitor fever temperature, diagnose breast cancer, check in drug tests that urine samples are 'genuine', identify potential failure in electronic circuits and faults in welding or metal fatigue cracks. No clues are given; these are ambitious tasks.	*Most pupils are familiar with forehead strap thermometers. Unaware of higher metabolic rate and therefore temperature in tumours, or that the 'crystals' are available in spray or cream form. With urine, only half realise that temperature is crucial; hence container with LC scale. Some reasonable ideas for circuits such as LC incorporated in printed circuit manufacture. Few realise that cracks in metal will show uneven thermal conductivity. Learning generally good with higher attainers; satisfactory with lower attainers.*
Teacher checks progress of discussions, corrects misunderstandings and prompts. Summary sheet of 'how it works' handed out	

Teacher passes round disposable battery testers and batteries. She explains that leuco dyes are less sensitive but cheaper and easier to use as 'printing ink'. But what else must there be? Pupils to figure out how the correct section of the tester indicates.	Many pupils are familiar with testers and quickly try them out. They realise that the question is: 'What gets the right bit hot'.
Teacher explains that this is an example of combined technologies: besides the thermochromic ink, there is a conductive ink.	Pupils speculate about a closed circuit of variable thickness or width. The top half know that the current is the same all round a series circuit and that the 'battery good' section must get hot only when the current is high, so resistance must be smallest there and conductive ink must be thicker/wider there. The weakest quarter are slow to get started on the problem; middle attainers show a mixture of correct ideas and misconceptions.
Teacher asks why thermochromic ink is chosen to go clear at about 40°C and why batteries do not have testers permanently connected in the label.	More able pupils realise that temperature change needs to be well above room temperature to avoid confusion and that operation drains the battery.

Homework

How could you paint a house to absorb heat from the sun in cold weather and reflect it in hot weather? If you overprint yellow ink with blue (cold)/clear (hot) thermochromic ink, what colours will you get? Generate textile printing ideas with plastisol leucodye, limited to 20 washings maximum, drying without heat and large screen printing mesh (large particles) resulting in heavy lay-down. Design a device for temperature checking deep in roast meat, not surface. Explain how a magnetic label LC gas level indicator can show when a bottle of gas is low (hint – liquefied butane/evaporation causes cooling).

Special educational needs

The support assistant for two pupils with moderate learning difficulties has not been briefed by the teacher, but promotes thoughtful discussion about some of the simpler applications (for instance, testing temperature of palm and back of hand with lips), but himself comes to the wrong conclusion for the conductive ink.

English as an additional language

The pupils are very competent in technology. Their good grasp of crystal layer interference is indicated by discussion between them of diffraction effects in 'mother of pearl' surfaces.

Overall

The teaching shows excellent subject knowledge and the lesson covers a wide range of contexts in relation to the specification (particularly Unit 3). The high challenge stimulates very good learning some of the time for the highest attainers. However, the teaching is 'over the heads' of the small number of lower attainers some of the time and their learning is generally unsatisfactory. All considered, teaching and learning are satisfactory.

[Teaching and learning satisfactory (4)]

Commentary

This lesson is much better for high attainers than for low attainers, and this crucial difference should be noted as a significant feature. The judgement 'satisfactory' for teaching must not lose sight of the separate judgements: 'good for high attainers'; 'unsatisfactory for low attainers'. The teacher carries with her the potential grade A/A* (distinction) candidates and the lesson is excellent preparation for work at a higher level post-16. However, there is insufficient support for lower attainers to access the topic and tasks effectively. It is quite difficult to explain in simple terms how liquid crystals work; unfortunately this teacher does not simplify the matter enough. This lesson confirms the impression of differential achievement from examples EG2, 3 and 4.

3.4   Other information

Evaluation should not dwell on aspects of curriculum, staffing, resources, accommodation and management unless they significantly affect what is being achieved. Example EG7 summarises relevant features that were picked up at Armstrong Higgs High School.

Commentary

These points add up to effective management. Funding has been well directed to giving pupils hands-on experience of innovative methods. A taster course in Year 9 is a good recruitment strategy, enabling pupils to appreciate the balance of written and practical work. In view of the pattern of differential achievement, the staffing change is sensible and seems to be producing the desired effect. Industrial experience has been secured, in line with the aims of the course.

3.5   Summary

It is important that the staff and senior managers are told exactly how things stand and why and how improvements can be made. At Armstrong Higgs High School, the weakness in provision is recognised and some action has been taken to improve things. There needs to be frank discussion about what still needs to be done, but the fine detail need not be laboured in a written report. For oral or written reporting, Example EG8 sets out a summary of what needs to be explained.

4   HEALTH AND SOCIAL CARE

The examples that follow are for the hypothetical Sanatum High School, where the course has been provided for about 20 pupils for a few years.

4.1   Initial information

Information is summarised from the pre-inspection forms. In this case, the previous inspection report contained no information on this course. However, the course leader has supplied some additional analysis of course outcomes and staffing arrangements.

Example HS1: summary of initial information and points to explore

Summary from information provided by the school and in the PANDA.

GNVQ Intermediate Part One H&SC has been established for a number of years, replacing a GCSE course in childcare and development and now giving way to the GCSE(V) H&SC.

In the past, results were indifferent when compared to pupils' achievements in other subjects: about a third of pupils, generally the least able, did not complete work for assessment in school or failed to meet pass requirements. Last year's results were much improved.

The course has been supervised for many years by a senior teacher (food technology specialist) who has continued to teach half the work in Year 10 (Unit 1); the rest of the teaching has been by a recently appointed teacher who also teaches biology and psychology in the sixth form.

The most recent results show for Intermediate Part One GNVQ: 2 distinctions, 4 merits, 6 passes, 3 part completions and 5 non-completions. This is similar to the national picture, though non-completion is a little high. For those who fully completed, the average points score in H&SC (11.5 for the double GCSE, or 2 x 5.75) is slightly better than their average points across all subjects taken (5.25), suggesting relatively good achievement. As the school's GCSE/GNVQ average total points score per pupil is graded C against all schools and B against similar schools, it is safe to say that those who fully completed achieved well. However, those who failed to gain certification underachieved.

Points to check

Predicted outcomes for Year 11 from Unit 1 and 2 work assessed so far and whether they are in accord with the results for the last cohort or are reverting to the earlier pattern.

Whether supervision of the course and the deployment of staff remain the same.

Hypotheses

The recent appointment has brought strengths to the teaching of topics involving biology and psychology.

The availability of the full range of grades with GCSE(V) could improve the effort of lower attainers.

Commentary

Attainment has varied over recent years; there is no consistent pattern. It is unclear whether the better picture in the most recent year is due to improved provision or greater commitment or is because a few individual pupils were lucky with the assessments. With only the Intermediate GNVQ available, there has been little to encourage lower attainers to complete once it became evident that they were not going to make grade C equivalent across the units: accreditation of one or two units has been used as a fall-back arrangement. Possibly low attainers were inappropriately recruited to the Intermediate programme and this diverted teachers' time, reducing the pace of work for others. The course co-ordinator may have good leadership skills, but may lack expertise in course elements such as physiology, psychology, sociology and knowledge of health service organisation.

4.2   Standards and achievement

Aims for the course are set out in the specifications published by the awarding bodies. Particularly pertinent are:

- investigation and evaluation of a sample of services and organisations in the health, social care and early years sectors;

- awareness of influences on health and well-being and the importance of motivation and support when improving health;

- recognition of stages of human development and relationships; and

- problem-solving in the vocational context.

It is the job of the verifier or moderator to check the accuracy and consistency of internal assessment on Units 1 and 2 (and for Units A, B and C of Part One GNVQ). School self-evaluators and OFSTED inspectors should simply seek a general picture of attainment and achievement in work on different units and with different teachers for different groups across the ability range. It is particularly important to compare standards of disparate elements such as sociology and physiology. What pupils gain from placements in care settings is crucial and this is best tackled by discussion with them. Examples HS2, 3 and 4 show how evaluators obtained an impression of attainment and achievement at Sanatum High School by analysing pupils' work, talking with them and observing activities in a lesson. Nonetheless, it is worth checking that centres are using the appropriate grading criteria laid out in the correct specifications. It is unlikely that centres will be adhering to national standards if they are either ignoring the specified criteria, using centre-devised ones or relying on work based on previous specifications.

Example HS2: analysis of pupils' work in Year 11

Most of Unit 1 was covered in Year 10. The bulk of the material in files is health service pamphlets (maternity services, speech therapy etc), and text downloaded from the Internet (play group associations, Samaritans). Work shows little application or interpretation of information for particular circumstances. For instance, a teacher has talked to the class, giving an account of the progress of her pregnancy, but pupils have not connected this with the network of health service provision; some pupils have visited a playgroup, but again they have not linked what they observed with the objectives and provision criteria in their files. A pupil who is herself a carer has written perceptively about additional services for disabled people, but there is no evidence of her experience being shared with others. Marking is superficial: where pupils' assignments should have involved analysis or comparison, mere description has been awarded undeserved praise, without indication of how quality could be improved. Though extensive in quantity, pupils' work is of below average quality. The work of pupils with special educational needs contains virtually no original material; it is almost entirely copied.

Unit 2 has featured extensive practical work, discussion with professionals such as a dietician, a general practice nurse and an environmental health officer. Body mass index and other indicators of physical health have been linked to dietary requirements. Reflective work has related personal hygiene to mobility, housing conditions and self-esteem. Marking poses probing questions – for instance about motivation of individuals to improve their health and the impact of health campaigns about sunbathing and healthy eating (including public perceptions of conditions such as eczema and obesity). The work is of above average quality.

Unit 3 work is at an early stage. About a third of pupils have convincingly compared and contrasted different theories of language development in young children. Most have been observant in recording language and physical progress (head circumferences, weight, following objects with eyes and head) when babies have been brought into school, and have linked their observations to established timescales of development. All have been obliged to take home an electronic baby that cries at intervals (including night), stops when it is cuddled and logs being mistreated. They have written perceptive accounts of the frustrations of being a 'good parent' to it. Preparatory notes for making presentations on, for example, 'How to burp your baby', 'Breast or bottle?' and 'Weaning and weeing' show that these opportunities have captured pupils' imaginations, boys doing as much research and effective structuring of material as girls. A girl with special educational needs has supported her presentation with telling photographs of her baby brother. Marking is probing: 'Why should non-milk foods not be used before three months?', 'What causes wind in babies?'. A pupil who has been absent for three weeks has been given a photocopied set of notes from an able pupil and the teacher has provided a set of questions to take him through it. The work is of above average quality. As with Unit 2, marking promotes progress.

Overall, on the work covered so far, attainment is average. There is good achievement in Units 2 and 3 but unsatisfactory progress on Unit 1.

[Attainment average (4)]

Commentary

The organisation of the course seems to be parallel work on Units 1 and 2 in Year 10, and in Year 11 completion of these (and completion of the internal assessment) together with all the work in the externally assessed Unit 3. Pupils' work across the different units (and teachers) should always be checked. It is important to distinguish between coverage of topics and understanding of them. In Unit 1, pupils have copied a good quantity of material, but they have done little that shows understanding of it. Marking does not seem to have made this distinction either. Pupils have been provided with some potentially helpful opportunities – for instance, to talk with a new mother and observe a playgroup – but teaching has not exploited this potential fully. With Unit 2 this has been managed. Marking of Unit 2 raises the quality of understanding by asking 'Why' and 'What unplanned outcomes might there be?' With work so far on Unit 3, engaging opportunities have facilitated good achievement. Achievement by different ends of the attainment range needs to be considered, as does that for boys and girls, but the main finding is the marked difference in achievement between Unit 1 and other work.

Example HS3: discussion with a group of three Year 11 pupils who have been in a nursing home shadowing nurses and nursing assistants for an 8.00 am to 7.00 pm shift

They have been able to assist to a point: for example, placing incontinence pads under patients lifted by professionals and helping to dress and shave patients. They are aware of the difficulties of communication with patients suffering from senile dementia or those under heavy sedation and the need to monitor body functions (constipation) and signs of discomfort (bedsores on pressure areas). The pupils can explain the risk of back injury to professionals manually lifting, washing and changing seated incontinent patients. They are sensitive to issues of personal dignity in hoisting patients for bathing and in applying barrier creams to prevent urine penetration. One pupil expressed concern about ethical issues in restraining patients from injuring themselves or others. Another was surprised by the extent of bruising to the shoulder and thigh of a patient who had fallen from a chair a few days earlier. They met a visiting chiropodist and a physiotherapist and could describe their work. They tell with amusement of unflattering nick-names for patients and senior staff. One says 'If you didn't have a laugh, you'd cry'.

Pupils have gained a sound grasp of aspects of all three units: jobs in health and social care, factors affecting health and well-being, self-concept and life changes. They are sensitive to some issues relating to personal dignity in a care setting, but have not fully internalised the implications and have too readily slipped into occasional cynicism.

Commentary

This well-conceived placement has given pupils opportunity to appreciate a good range of nursing home issues. They understand why some procedures are followed. The roles of different professionals are recognised. Personal health and safety at work hazards are realised (back injury). They have some sensitivity to the 'care value base' code of conduct covered in Unit 1.

Attainment in knowledge and understanding on the points discussed with the pupils is average for Year 11. Example HS2, the analysis of Year 11 pupils' work on the three units, suggested above average attainment and good achievement on Units 2 and 3 but weaker work on Unit 1: average attainment overall. If the discussion here is with pupils who are typical of the year group, attainment evidenced in talking about the nursing home placement seems to be at least satisfactory.

Example HS4: Year 11 group of 21 working on Unit 3: 'Understanding personal development and relationships'; 1-hour session

Context

The objective is to write up an evaluation of work on 'conservation' and 'decentering' with seven-year-olds. The pupils have made several visits to primary schools in groups of three, where they have carried out 'experiments' on cognitive development; they are now working in groups at computers, assisted by the teacher.

All pupils are aware of Piaget's notion of stages of development and can explain 'spatial awareness' and 'conservation' with examples. A boy with English as an additional language, no longer at an early stage of language development, says he found these specialist terms difficult at first but that things have become clearer with the practical work. Most are unclear about the distinction between 'assimilation' and 'accommodation'. They have used the 'mountain experiment', and tasks on conservation of volume and number and have had children talk through an imaginary walk around school. All can relate their activities to the ideas of Piaget and Borke. Only about half the groups had scripts for the experiments, so that they were always presented in the same way. Only one group recorded children's ages as years and months; none enquired of the infant teacher about the children's general cognitive ability. Two groups had note takers to record exactly what the children did or said; one group used a tape recorder; other groups simply ticked a can do/can't do checklist. Most groups can identify a pattern in their results: children encountered for the first time seemed more successful in the experiments in later visits and some pupils' experiments seemed to get more successes than others. One group noticed that the classroom support assistant and a parent working together got complete success with the first three children experimented upon: much greater success than pupil experimenters elicited. These three pupils are skimming the work of Bowlby (attachment theory) for explanations, though one of the three is very confused about this and the work of Skinner.

The two stronger groups, led by perceptive individuals, are brainstorming and recording salient evaluations on the computer for the teacher to check. Three groups are coming to overview evaluations such as 'Children decenter sooner than Piaget said, but children with English as an additional language are slower.' They are marshalling evidence for and against. Only one group has a clear view about other factors that may affect such an apparent picture. Weaker groups are simply writing up a descriptive account of what they did and what happened, with little interpretation or evaluation.

An ambitious task for Year 11. Left largely to their own devices (so that the teacher can gauge levels of understanding), the weaker groups are coping at a level roughly average for their age. About a quarter of the class appear to show a maturity of reflection, methodology and subject knowledge that would be typical amongst early Year 12 students. However, the work of groups of three is generally led by the most able pupil; what groups are doing is sometimes better than some individuals in the group would be capable of alone. Nonetheless, all pupils have achieved well from this opportunity.

[Attainment above average (3)]

Commentary

Much has been expected of these Year 11 pupils. Overall outcomes are graded as above average; they would be well above average (grade 2) in early Year 11. All (including the lowest attainers) can link these concepts to the theories of Piaget and Borke. The most able have impressive, though not perfect, investigative skills in this context. All were sufficiently effective in the investigation and recording for it to be worthwhile. The most able can go beyond the immediate line of enquiry to make connections with other theories. There are very good skills of analysis amongst the more able; the weakest are describing adequately. Where pupils are working in groups, the outcomes for the groups are generally typical of the most accomplished pupils and care must be taken not to overestimate standards overall. However, this observation of standards in a timetabled session confirms what was apparent from the samples of pupils' work (example HS2): there is good achievement on Unit 3 across the ability range.

4.3   Teaching and learning

Lessons in H&SC will not always involve extensive 'teaching'. Pupils may have been organised to make presentations about their research or work off-site. They may be using the time to write up research or practical experience or they may be preparing presentations. When lessons are of this kind, evaluators may get a more reliable picture of standards than of teaching. On some occasions, a health professional or client may visit to talk with the pupils. Such sessions can be observed and evaluated as for any other provision. Where pupils as a class, in small groups, or individually, are visiting a care setting out of school, evaluators should use their discretion in deciding whether their own presence would be problematic.

Whatever the format of the lesson, teaching and learning should be judged against the criteria in the *Handbook*. For instance, has a visitor been suitably briefed to give a talk pitched at the right level (planning effectively; good subject knowledge; suitable methods)? When pupils are working individually or in groups on a continuing project, do teachers assess how well they are getting on and set high expectations? Where, because of the lesson format, there is insufficient evidence to grade teaching in that lesson reliably, a grade might not be given for teaching in the lesson; nonetheless an impression might be formed of how effective teaching has been over a longer period of time. There are two possible weaknesses to be aware of: teaching in the subject may contain unnecessary jargon ('barriers to carer-client communication', 'value bases of care settings'), and opinions (teachers' or pupils') may sometimes masquerade as evidence. Examples HS5 and 6 are for teaching and learning at Sanatum High School.

Example HS5: Year 10 group of 20 working on Unit 2 'Promoting health and well-being'; 1-hour lesson

Objectives: early lesson on understanding blood pressure and peak flow and how to measure them (in preparation for coursework involving monitoring individuals who are pursuing a plan for promoting health)

[T+/++ good/very good teaching; L+/++ good/very good learning]

Teacher explains clearly and succinctly that, traditionally, atmospheric pressure and blood pressure were measured by a column of mercury: shows antique mercury barometer and large-scale diagram of how it works T++. She asks pupils about pressure from surface to bottom of a tank of water – hence pressure from head to toe in a standing person. Pupils very convinced that it would increase L++. Defines blood pressure as at the level of the heart. Passes plastic bottles of mercury and of water; pupils appreciate high density: notion that mercury is about 13 times 'heavier' than water T++. Hence 10 cm of blood = 8 mm of mercury. Quick questions and eager, accurate, responses on difference of pressure from head to toe of a 150 cm tall person L++. Presents automatic electronic wrist blood pressure monitor and explains that wrist should be at level of the heart, or measurements need to be adjusted. Demonstrates use, with pupils suitably arranged for viewing. Explains clearly systolic (brachial artery closed) and diastolic (artery fully open) T+. In pacy and challenging question and answer session, pupils say that blood pressure will increase if heart beats faster or arteries get narrower. They give examples of faster beat: excitement, anger, exercise L++. Examples of hardening of arteries: fatty substances, smoking and stress L++.

Pupils work adroitly in pairs using five blood pressure monitors efficiently on one another before and after exercise L+. More able pupils are inventive in exploring other body postures (for example, handstands); perceptive discussion about whether result is due only to body position or to excitement/exercise etc L++.

Meanwhile, ten pupils make well-focused notes on use of a peak flow meter and how peak flow varies with age and body size. They can relate peak expiry flow to width of the trachea and bronchi and to conditions such as asthma L++. Very good use of time when equipment is limited, with note making from appropriate sources such as maker's instructions for the meter, pamphlet on asthma, and a human biology text T+.

Teacher monitors practical work closely to ensure safe practice: that the tightness of cuffs is appropriate and that working instructions are well understood. She challenges pupils about interpretation of results T++.

[Teaching and learning very good (2)]

Example HS5 records evidence from which judgements about the qualities of teaching and learning should be self-evident. There is extensive evidence here of the teacher's very good subject knowledge (vertical variation in pressure, systolic and diastolic, factors affecting pressure). Methods are apposite (pressure in a tank, density of mercury and water). Equipment is well chosen (electronic sensor rather than sphygmomanometer). Pupils, resources and time are well managed. The lesson has clear objectives and they are accomplished. Pupils are well monitored and there is challenging questioning at all stages.

There is convincing evidence here of generally very good teaching in relation to OFSTED criteria (*Handbook for Inspecting Secondary Schools,* page 44: teaching criteria). Most elements of teaching are very good (T++), others are good (T+). Pupils are acquiring substantial new knowledge. They are applying themselves very effectively as they work adroitly, inventively and with good focus in the contexts indicated. They get through a remarkable quantity of work in the time available. It is evident that they take real interest and show very good understanding. This judgement of very good teaching and learning on Unit 2 confirms the impression formed from analysis of pupils' work.

Example HS6: Year 10 group of 21 working on Unit 1 'Health, social care and early years provision'; 1-hour lesson

Context. Pupils have been told to work in threes to find web sites about foster care of children and adolescents and to organise themselves to make seven five-minute presentations of what they have found out.

Group 1 (identified by teacher as a strong group). Local authority web site. Why is foster care needed? Illness of parent, problems of housing/relationships, abuse/neglect, parents do not want to look after child. Different categories of care: mainstream (long- or short-term), 'home from home' as respite care (clearly explained), for children with a disability (the range is not made very clear) and a daily rate of about £20 (unclear whether this is a maintenance grant or a fee for the carer), 'community parents' for 'very difficult' youngsters and a fee of £175 weekly. All this presented confidently, succinctly and fairly clearly; there is good attention from the class. In response to questions from others, neither pupils nor teachers clearly explain how mainstream fostering differs from that by 'community parents', and what the payment position is.

Group 2 (middle ability). Independent fostering agency (non-profitmaking trust) set up under section 105 of Children Act (1989), to which about 40 local authorities delegate fostering under Foster Placement (Children) Regulations 1991. Some uncertainty about who checks suitability of foster parents, why local authorities might delegate in this way etc. Plethora of statistics about turnover of children is boring and confusing.

Group 3 (weak). Safe Families Act (1997) [sic]. Teacher looks puzzled. Pupils refer to New England. It becomes apparent that pupils have used a USA web site. (Though comparison with USA is potentially worthwhile, it has not been well handled in this case, because the pupils' activities were not monitored well by the teacher.)

Group 4 (middle). Say they looked at a few council and voluntary web sites but have nothing to add to groups 1 and 2. Most 'foster care' web sites were either USA or about pets.

Group 5 (strong). Chat room/discussion board for foster parents. Picked up some good tips about settling youngsters new to them: linking up with other 'kids on the street', liaison with the school and natural parents, giving them 'space' etc. Other pupils very interested in this and an illuminating discussion develops: no participation by the teacher.

Group 6 (middle). Local authority recruitment web site: suggests fostering as a career, recommends NVQ in child care, after a year eligible for a 'fee for skills'. Family placement social worker checks out applicants – for example, by talking with whole family and older children separately. Discussion with teacher about whether this health and social care course 'counts'.

Group 7 (weak). Authority in which school is located: foster parenting features in Local Agenda 21 (which they know about from citizenship) as an element of social inclusion provision. Evidently the teacher gave some advice to these pupils about accessing the web site.

Pupils explain to the evaluator that they used a variety of search methods, but that going to a named local authority social service web site is generally easiest. A more able pupil took the initiative in liaison between a number of groups to minimise overlap in what was presented.

Teacher makes some final plenary points, summarising on the blackboard what has been learnt: effective consolidation.

Overall

Good learning has taken place in 5 out of 7 groups whilst searching the Internet, summarising a web site and preparing presentations. Attention and discussion suggest that the class has had a good learning opportunity from the presentations of others. However, this is largely due to the initiative of pupils and there is little evidence that the teacher has monitored and steered pupils' work to ensure an effective lesson. There has been little input from the teacher during the lesson to clinch points

or clarify them.

[Teaching satisfactory (4); learning good (3)]

Commentary

This is one of the rare occasions when learning and teaching grades differ. The teacher has been lucky that the lesson has turned out well, but this owes more to the pupils' initiative and independent learning skills than to her supervision and guidance. This lesson confirms the impression, from analysis of work and talking with pupils, that productivity on this unit is haphazard. There is a suggestion that the teacher is not very confident in her own subject knowledge.

4.4   Other information

Evaluation should not dwell on aspects of curriculum, staffing, resources, accommodation and management unless they significantly affect what is being achieved. Example HS7 summarises relevant features that were picked up at Sanatum High School.

Example HS7: summary of evidence from discussion with the course leader

- *In the past some weaker pupils were recruited to the GNVQ Intermediate course for whom Foundation would have been more appropriate, and they floundered. A 'taster day' for GNVQ courses was introduced before option choices in Year 9 so that pupils now have a better idea of what they are opting for. These factors partly account for the recent improvement in results.*

- *Internal assessment of Units 1 and 2 for the current Year 11 pupils shows that, so far, attainment is on par with last year's results, but it is higher on Unit 2 than on Unit 1.*

- *The course leader (senior teacher) admits that she is unhappy with her brief and that there are parts of the specification with which she does not feel competent. Though she still teaches Unit 1, she looks forward to handing over the whole course to the newly recruited teacher.*

Commentary

These factors explain why standards have improved and remain so. The weakness in leadership and the teaching of Unit 1 are acknowledged and plans are in hand for resolving these difficulties. Management has acted reasonably.

4.5   Summary

It is important that the staff involved and senior managers are told exactly how things stand and why and how improvements can be made. At Sanatum High School, it is acknowledged that, for plausible reasons, the leadership of the course and some of the teaching have been indifferent, but these weaknesses are being rectified. This calls for candid discussion, but the difficulties need not be laboured in a written report. For oral or written reporting, example HS8 sets out a summary of what needs to be explained.

Example HS8: summary of judgements on H&SC at Sanatum High School

The quality of provision in health and social care is good. There is no previous report on this course.

Strengths

Attainment overall is as good as that found on this course nationally and pupils are achieving well. On two of the three units, attainment is above average. Pupils of all abilities and those with English as an additional language achieve equally well.

Teaching is generally good. It ranges from satisfactory to very good and is particularly stimulating with the units 'Promoting health and well being' and 'Understanding personal development and relationships'. Pupils are well motivated and learn well, sometimes showing strong independent learning skills.

Pupils are provided with worthwhile opportunities for work away from school in a variety of care settings; they are generally enabled to make good use of these.

Areas for improvement

Standards in 'Health, social care and early years provision'.

Emphasis, in some of the work, on analysis and evaluation, rather than simply the gathering of facts.

On occasion, sharper guidance for pupils, both as they undertake activities and through the marking of their written work.

Pupils' appreciation of how clients should be treated in care situations.

5 LEISURE AND TOURISM

The examples that follow are for the hypothetical Otium Community School. The first pupils completed L&T Part One GNVQ in summer 2001.

5.1   Initial information

Information is summarised from the pre-inspection forms. In this case, the previous inspection report contained no information on this course. However, the course leader has supplied some additional analysis of course outcomes and staffing arrangements.

Example LE1: summary of initial information and points to explore

Summary from information provided by the school and in the PANDA.

GNVQ Intermediate Part One L&T was introduced in September 1999, replacing GCSE physical education and now giving way to the GCSE(V) L&T (although the department are considering reverting back to GCSE physical education).

The decision to change from GCSE physical education to offering 'double award' L&T has not been entirely successful. Previous PE results were always above the national average (with the number of pupils gaining C or above between 55% and 72% over the previous five years).

Last year's results for L&T were lower than the national average for this qualification. Over half the 35 pupils taking the course failed to gain the overall award, although all bar two managed to gain accreditation for one of the three units. In terms of residuals, pupils did less well in L&T than their other subjects; in PE in previous years, the reverse was true.

The course is managed and resourced from the PE department, although the second in the department, the previous head of department, has day-to-day responsibility for the course and teaches Unit A (Unit 1). She also teaches in the geography department. The other two units are each taught by two other members of the PE department, one experienced and one in his second year of teaching.

Points to check

Are the unit specifications being adequately covered by teaching staff?

Is the subject knowledge of teaching staff appropriate? How do these teachers keep up to date?

Are staff sufficiently prepared for the geography element of the course?

How is pupils' progress monitored? What are the reasons why pupils fail to complete all the units and hence the full award?

Hypotheses

The content, assessment regime and general demands of the course have not been fully understood by the department.

There is a mismatch between teaching expertise and learning resources and the needs of pupils on this course.

Commentary

The decision to change from GCSE PE to GNVQ L&T has clearly not led to the same levels of attainment and has not afforded all pupils the opportunity to achieve a full qualification, although the majority have been awarded one unit accreditation. Attainment is below average. Evaluators should explore pupils' aspirations for the outcomes of the course and whether teachers have set sufficiently high expectations for pupils' achievement. There should also be investigation of pupils' and teachers' understanding of the course, its GCSE equivalence, how it is assessed and hence what they must do to achieve success in individual units and the full qualification. Assuming the cohorts on entry to the two courses were broadly equivalent (check Key Stage 3 National Curriculum results and discuss with head of department/course leader), then an explanation must be found for the disparity in attainment. If cohorts are similar, achievement on the new course is generally unsatisfactory and for those who do not achieve a full award it is poor. This may be due to teachers' inadequate knowledge and experience or elements of unsatisfactory teaching (one of the three did not teach on the previous course). This could be investigated with reference to lessons taught by these staff on other courses.

5.2   Standards and achievement

Aims and objectives for the course are set out in the specifications published by the awarding bodies. Particularly pertinent are:

- investigation of a range of areas within the L&T industry;

- gaining knowledge, understanding and skills required for employment in the sector;

- acquiring further knowledge by practical application in real work situations.

It is the job of the moderator or verifier to check the accuracy and consistency of internal assessment on GCSE(V) Units 2 and 3 (and for units A, B and C of Part One GNVQ). School self-evaluators and OFSTED inspectors should simply seek a general picture of attainment and achievement in work on the different units and with different teachers for different groups across the ability range. Nonetheless, it is worth checking that centres are using the appropriate grading criteria laid out in the correct specifications. It is unlikely that centres will be adhering to national standards if they are either ignoring the specified criteria, using centre-devised ones or relying on work based on previous specifications. It is particularly important for L&T qualifications that examples of areas of study are drawn from the appropriate 'leisure and tourism' specification components (not from 'travel and tourism' unless there is an obvious overlap).

Examples LE2, 3 and 4 show how evaluators obtained an impression of attainment and achievement at Otium Community School by analysing pupils' work, talking with them and observing activities in a lesson.

Example LE2: analysis of pupils' work in Year 11

Most of Unit 1 was covered in Year 10. There is, however, a plan to revisit the unit in the final term to extend the work and possibly improve the standard. The course outline has been included in each folder with a copy of assessment requirements. Introductory worksheets on the key components of the L&T industries have been completed fully by pupils and appropriate feedback has been given by the teacher – for example, 'Make sure you understand the SEVEN key components' and 'This organisation can be both leisure and tourism' and so on. Pupils have given good examples of organisations and activities which provide links between 'leisure' and 'tourism' – for example, away football match and activities undertaken on holiday. In the latter example, the pupil has described all the activities undertaken by a fictitious family on holiday in Yorkshire, describing visits to historic sites and water-based activities, and interweaving this with descriptions of different modes of travel. Whilst all pupils have provided adequate definitions of 'leisure' and 'travel and tourism', many have simply made lists of organisations or activities rather than describe what they do and the type of customers they serve. All have chosen an area (region) to describe the L&T organisations in, as prescribed in the specifications, and most have provided satisfactory information on their chosen organisations. None has (yet) explained how L&T facilities can work together or how gaps in provision could be met by these facilities (required by criteria for higher grading).

The majority of work in portfolios for Unit 2 has been copied (probably from basic business text books – for example, marketing techniques and the marketing mix) or downloaded from the Internet – for example, information from major travel companies, fast food outlets and sports organisations. The one substantial piece of pupils' work has been based on the design and use of a questionnaire which pupils used to explain 'market segmentation'. Four groups have attempted this, one successfully using the local sports centres to construct a customer profile. The four in the group have presented this information in a number of interesting graphs and charts (using ICT). The other groups clearly did not prepare well enough and their results are too few in number and poorly collated and presented. Some of the folders contain notes from a visit by the manager of the local McDonald's, but these do not relate to a structured lesson activity. The portfolios contain little feedback to students – many ticks but not much more.

Unit 3 comprises a great quantity of written notes about customer service and how excellent customer service brings benefits to the L&T industry, how important dealing with complaints is, the difference between internal and external customers and so on. It is difficult to see which organisation pupils selected for their review of customer service (many have notes on organisations featured in the other two units). There is evidence of role-play activities, looking at complaints using some well-chosen scenarios – bad service at a hotel, late arrival of trains, sports fixtures called off. There has been some attempt at describing what went on in the role-play but there is little structure to the write-ups – for example, the nature of the complaint, the best way to handle it, the effects on the organisation etc.

Overall attainment is below average. In Unit 1, pupils' achievement is satisfactory but unsatisfactory in Units 2 and 3. In the latter cases, there is a clear need for portfolio work to meet the demands of the specified assessment criteria for the units.

[Attainment below average (5)]

Commentary

The above has identified a clear difference in achievement between the three units; however, it is unsatisfactory overall.

Whilst the students are clearly gaining a satisfactory introduction to the qualification with Unit 1, this is not being carried forward into the practical aspects of the other two units ('Marketing' and 'Customer service'). In Unit 1, pupils should demonstrate that they understand the structure and components of the industry and how they are linked, with copious use of relevant examples. In the other two units, pupils should be focusing on a 'selected' organisation for a more rigorous analysis of the ways in which marketing and customer service relate to the organisation in question. Coverage of units can be checked by reference to notes included in portfolios. However, evaluation comes from questioning of pupils, and analysis of their writing-up of activities undertaken and whether they are applying theory to a particular organisation. It is important that pupils understand why organisations do things as they do, as well as being able to describe the products they offer and who their customers are. The above analysis shows that students are not yet capable of doing this at a standard to enable them to gain the higher grades. There appears to be an emerging issue about the quality of marking and monitoring of pupils' work in Units 2 and 3.

Example LE3: discussion with a group of 4 Year 11 pupils looking at Unit 3 'Customer service'; 30 minutes

Context. They have recently spent several afternoon lessons in outside organisations – two in the local sports centre, one in a travel agent's and one in a cinema.

The group are able to explain fairly clearly what customer service is and how it is important to an organisation – helps to sell products, keep its 'good name', make profits, etc. They are less clear about 'internal customers' (despite having notes on the topic) and how staff and departments provide a service for each other. In terms of the assessment criteria, all are unclear about the necessity of choosing ONE organisation as the basis for their portfolio evidence. All are clear about the need for organisations to sell their products, as part of customer service. However, there is little grasp of situations where customer service does not involve simply selling – for example, giving advice, and dealing with problems and complaints.

They have yet to provide evidence of customer records and only one, the pupil using the travel agent, has pursued this. They have all three relied on descriptions of discussions with relevant staff at the organisation. Whilst all have a notion about how each organisation deals with complaints, none is able to state how effective they have been and hence provide some evaluative comments for the higher grades.

They have been involved in various role-play exercises in lessons, which they have clearly enjoyed. However, they are unclear whether they should use these as evidence or whether they are actually going to gather evidence from working at the organisations concerned. The role-play activities have included dealing with customer complaints, where most have understood the responsibilities of employees in resolving them.

Commentary

The lack of clear guidance from the teacher on the outcomes required from these activities (and the unit in general) has led to the students' lack of clarity about the demands of the unit. However, all know something about general customer service needs and their importance to the business. There is no evidence of the higher order skills of analysis and evaluation, although the role-play activities, if properly recorded, would provide evidence that they could handle customer complaints properly. In many respects, it is difficult for pupils to generate appropriate evidence to gain good grades on this unit. There are relatively few difficult technical terms (except phrases like 'internal customers') to lend substance to written work. Pupils must be very specific when describing activities of their chosen organisations – for example, by providing a clear step-by-step description of an organisation's complaints procedures. Where the unit requires pupils to compare and contrast the way an organisation serves its internal and external customers, this expects very clear definitions of the two types of customers, with areas of comparison and contrast clearly listed. Attainment is average (with notable weak features) and achievement is barely satisfactory, because the provision does not focus sharply enough on the specification for the unit.

Example LE4: Year 11 lesson on 'The marketing mix' as part of Unit 2 'Marketing in leisure and tourism'; 1-hour lesson

Objective: to identify and describe the marketing mix of a selected tourism organisation or leisure facility; pupils working in five groups to produce a booklet with clear reference to 'product, price, place and promotion' (the four Ps).

Context. Pupils have been introduced to the marketing mix the previous week and have been gathering information to start work on the booklet.

All pupils can remember the phrase 'the four Ps' but not all can name them. There are no good definitions of 'place', but those questioned can give a satisfactory definition of the other three. It takes much prompting by the teacher to get pupils to consider more than the superficial meaning of each 'P'. For instance, 'price' includes credit terms and discounts, and 'product' also includes the brand name, any after-sales service offered and guarantees. Pupils are well aware of the different types of advertising outlets (including television, radio and newspapers) and how certain advertisements – such as those for running shoes – are aimed at certain audiences. Whilst not coming up with the correct term 'target market', pupils are able to describe how a market can be

segmented to influence the design of an appropriate advertisement.

Information gathered by the groups varies in scope and complexity. Two groups went to two travel agents and were laden with holiday brochures, but both are struggling to work out how to synthesise the information into suitable chunks to answer the brief. One has settled for cutting out prices for a particular resort rather than providing a general description or range of prices, which vary according to factors such as time of year, place, facilities offered and number of people. The other group attempts to cover the brief by concentrating on one brochure for holidays in Majorca. This second group is also able to refer to the offer of 'free kids places' as part of the 'product' and, with prompting from the teacher, they show how this could be featured as part of 'promotion'. There is considerable confusion in the first group over 'place' (as 'place' where the holiday is rather than something with a wider context). The other three groups (using the sports leisure centre - again, the local zoo and the city centre bowling alley) have a variety of outcomes. The leisure centre group just lists the prices on offer but does not elaborate on discounts and special offers, whilst the other two groups make clear reference to 'family' tickets and how this encourages specific types of customers.

The majority of pupils are unable to use their own words for describing the products and rely heavily on quotations from the materials produced. There is very little use of technical marketing terms by students, such as 'target market', 'chain of distribution', 'loss leader', and 'supply and demand'. There is also little evidence (at this stage at least) of pupils analysing and evaluating the effects of organisations' marketing strategies – that is, answering the question 'Are these strategies working?'

The teacher, in moving between groups, is able to draw the lesson together by ensuring individuals in each group have recorded something under the four marketing mix categories.

[Attainment below average (5)]

Commentary

Pupils have gained a rudimentary knowledge of the marketing mix and its four separate components, although there is some confusion over the term 'place'. None of the groups has yet developed the higher order skills (above grade C) of analysis and evaluation which allow them to link theory with their chosen organisations and comment on the effectiveness of marketing policies. It is likely that some individuals within each group have the capacity to do this, with some guidance from the teacher, and later on in the year may be able to reach the higher grades. However, attainment is below average at the stage seen. This confirms what has been learned from analysis of pupils' work.

5.3   Teaching and learning

As with other vocational qualifications, lessons in L&T may not always involve formal 'teaching' but may include lessons off-site, writing up evaluations and so on. This may make it easier to judge standards rather than teaching. Nonetheless, pupil-led activities such as role-play, and even pupils' presentations, may give ample opportunity to judge teachers' effectiveness by their planning and interventions and by the way they have set up the lessons and prepared materials. There may be instances where visitors talk to the students, and again, whilst this may not be an obvious activity from which to judge teaching, some comment can be made about aspects such as preparation (of the speaker and the topic), introductions, follow up, and how the visitor's contribution fits into the programme structure. Whatever the format of the lesson, teaching and learning should be judged against the criteria in the *Handbook*. It is possible to judge how effective teaching has been over time.

Weaknesses to be aware of include:

- a reliance on superficial comments about customer service (Unit 3): for example, stating that 'organisations need to have good customer service', without expanding on why and what the effects of poor customer service are;

- the absence of contact and students' involvement with real L&T organisations and activities – for example, dealing directly with customers in some capacity; it is highly unlikely that the course will be satisfactorily completed by structured teaching and 'role-play' alone.

Examples LE5 and 6 are for teaching and learning at Otium Community School. In these lessons, they are of the same quality. Occasionally the quality of learning differs from that of teaching. Such an instance is Example HS6 in this booklet.

Example LE5: Year 10 group of 16 pupils working on Unit 1 'Investigating leisure & tourism'; 1-hour lesson

[T+/++ good/very good teaching; L+/++ good/very good learning]

Context and objectives. Fourth lesson on the unit – pupils' feedback on research into four local leisure and/or tourism organisations; four groups (of own choosing) to present research findings to rest of class. The pupils have to understand services provided by each example, whether they are leisure or tourism or both (thereby reinforcing the links between leisure and tourism).

Teacher recaps on previous lessons, emphasising variety of L&T (T++) – pupils are keen to proffer answers and give a wide range of examples (theatre, travel agents, sports centres, pubs, etc.) (L++). Teacher asks for the seven key components of 'leisure' industry and the six for 'tourism' to provide structure to lesson (T+) – pupils manage five and four of them respectively through question and answer work (L+). Put on board. Teacher asks pupils how an activity could be in more than one component (T+) – less successful but example of local sports complex (which many use out of school) provides good answer (sport plus food, drink and parties) (L++).

Teacher asks for feedback from each group to rest of class on research; good change of pace (T+) – pupils feel involved and are keen to participate (L+). Each asked to report on services offered, type of organisation, whether leisure or tourism and links to transport industry.

Group A

Travel Agent. Group understands services offered and how travel agent fits into leisure industry (L+). Teacher able to draw out of group the variety of types of holiday to appeal to different customers – marketing link – and how company made a profit (T+) – which leads effectively to description of private sector organisations (T++). Lively exchange with group about teacher's and pupils' summer holidays and how different people demand different types of holiday.

Group B

Local sports complex. After description of obvious services (sport), pupils are able to list other 'services' offered – food and drink, parties, local employment, county/national competitions, and even help with GNVQ studies (L++). Teacher questions whether the sports complex does enough marketing of its services (good link with Unit 2 'Marketing in leisure and tourism') and what else could be done to increase customers (T++) – pupils are encouraged to come up with interesting new ideas: 'advertise on the local radio'; 'presentations at school events' (L++).

Group C

Local McDonald's. Less successful presentation by pupils (hesitant and only give list of food provided); good comparison though by teacher of 'fast food services' and traditional restaurants and market McDonalds is aiming for (T+). The teacher responds constructively to a weak presentation, helping the pupil to gain a better understanding of what is expected (T+).

Group D

Tourist attraction. Group has chosen 'Eurodisney', despite the teacher's instruction for the attraction to be local (one of the pupils has been there on holiday). Good use by presenter of brochures (from travel agent) illustrating attraction and local newspaper offer (L+). Teacher neatly brings in transport links (T++) – class responds to question, listing modes of transport to attraction from own town (L+). Again, the teacher has retrieved the situation well, bringing the focus back to the lesson objectives (T+).

Handout then given to class (T+) asking for information/summary on above organisations, emphasising the question whether each is leisure or tourism or both, the services provided, transport links and methods of marketing.

Summary at end concentrates on how activity can be both leisure and tourism (T++). Teacher asks about forthcoming local football match – services provided, audience, and so on (added to handout answers). Pupils clearly thinking about the different aspects of an activity in the L&T industry (L++).

Homework given out – five more examples to cover. (T+)

[Teaching and learning very good (2)]

Commentary

At this early stage, pupils should know and have recorded clear definitions of the two parts of the industry, the services they provide and the key components. The lesson has built on this, showing evidence of good planning, progression and opportunities for independent research and evaluation (to allow higher attaining pupils access to higher grades). The teacher's subject knowledge is good (components of industry, services, transport links); she also appreciates how the course as a whole fits together (links to marketing brought in). The teacher is well prepared (effective lesson plan using a variety of methods, handout, homework sheet, summary at the end) and pupils are kept involved and interested (question and answer, pupil presentations). The teacher is able to use the content of the pupils' presentations to highlight additional parts of the course (profit, business objectives, marketing). There is therefore convincing evidence here of generally very good teaching in relation to OFSTED criteria. Pupils are questioned throughout and the teacher uses this to ensure that all pupils in the class are included in the work. They are kept engaged with the task at all times and are able to complete the handout and answer questions correctly. As indicated, most elements of teaching are very good (T++); others are good (T+). Pupils are building on previously acquired theoretical knowledge with real examples and are able to link the two to local situations – including the Eurodisney example (local transport). This is clearly part of a good introduction to the

subject for this Year 10 class, consolidating their early knowledge as well as introducing them to a number of new concepts to be studied in depth a little later. There is sufficient evidence of very good learning – but this should be confirmed by comparison with pupils' work (which should contain clear definitions of the industry and its key components) and/or discussion.

Example LE6: Year 11 lesson on 'effects of poor service' – part of Unit 3 'Customer service'; 1-hour lesson

Objective: for students to be able to identify and calculate the effects of poor service on a business and how internal customers affect business outcomes

[T++/+/- very good/good/unsatisfactory teaching; L++/+/- very good/good/ unsatisfactory learning]

Context. Introductory lesson on topic asking pupils to work (in threes) from a common scenario (given in a handout). This describes the experience of a family staying at a hotel where a number of incidents have led to the family making complaints and deciding to leave early. The teacher is to video the father of the family complaining to the manager as a role-play exercise.

Teacher is well prepared with handout and proposed groups (T++), but fails to introduce the objective of the lesson clearly (T-, L-). Groups are not quick in getting together – they have previously worked in other combinations and take time to respond to the teacher's instructions. However, the teacher eventually makes the purpose clear (T+) by authoritative instructions for pupils to copy from board – definition of 'internal customer'. Teacher asks who 'external customers' are in a hotel, which pupils are able to identify (L+), but no-one in class initially has a grasp of who 'internal customers' are, despite the definition being on the board (L-). Teacher tries other examples (T+) – ICT department in a company – which finally stimulates some to offer examples of 'cooks and cleaners' and 'maintenance men' providing a service for hotel managers (L+).

Teacher asks pupils to go through handout listing the examples of poor service and how they could have been avoided. Teacher goes from group to group encouraging them (T+) to think how the hotel employees work together, as internal customers, to provide a service to the end user (L+). Teacher stays too long with one group (T-), in which the pupils are insistent that everyone should be 'sacked immediately', completely missing the point of the adverse effect this would have on current and forthcoming bookings (L-). The pupils in the group are brought back on task with a brisk question and answer session (T+) on identifying the incidents and a list of what could have been done to avoid them. The pupils contribute significantly to these ideas (L+). By the end of the list, compiled on the board, pupils are beginning to grasp the idea of internal customers providing a service which, if it goes wrong, has an impact on the service to external customers (L+).

Teacher gives out a second well-prepared handout (T++) asking for a calculation of 'lost business' generated by the family leaving compared with another two families who have recently stayed and sent a thank-you card. The teacher gives a rather hurried explanation (T-) of 'repeat business' and the effects of 'good/bad recommendations', with estimates used in the handout calculation, before requesting 'the answer'. No-one manages to give it. (L-). This leaves about 15 minutes to attempt the video – too short a time to set it up correctly as a piece of portfolio evidence (T-). However, the four pupils involved enjoy the activity and the class is able to empathise both with the manager ('let down by his staff – internal customers') and with the complaining father ('only interested in the service to him - the external customer') (L+).

There is just enough time for the teacher to tell pupils to finish the second handout for homework (T+).

[Teaching and learning satisfactory (4)]

Commentary

The teacher has prepared fairly well (relevant scenario, two handouts, clear objective) but has not timed the lesson well enough to ensure a useful recap of the topic. The decision to include a video clip in the lesson is not a good one. Video of role-play exercises is very useful for recording simulations (if actual work placements cannot be used to generate evidence). However, it must be carefully planned, practised by pupils in advance of shooting and have carefully thought out procedures for identifying the pupils involved. The teacher has provided 'substance' to the lesson by introducing a relevant scenario that can lead to discussion and activities related to internal customers and measuring the financial effects of good or bad service. There is enough evidence that teaching is satisfactory in relation to OFSTED criteria, despite some things not going well. Pupils are learning productively overall and effective questioning leads to a satisfactory understanding of the main objective.

5.4   Other information

Evaluation should not dwell on aspects of curriculum, staffing, resources, accommodation and management unless they significantly affect what is being achieved. Example LE7 summarises other relevant features that were picked up at Otium Community School.

Example LE7: summary of evidence from discussion with course leader

- *Course leader is keen to make a success of the course and has been on several professional development courses, as well as becoming an external moderator for the qualification. She feels that the unit 'Investigating leisure and tourism', which she teaches, is 'going well' but thinks that the qualification needs another specialist and/or more training for the teachers of the other units.*

- *Attainment levels on entry are deemed to be broadly equivalent to those previously studying the GCSE physical education course.*

- *She feels that more could be done for the qualification: more learning resources, including a dedicated classroom (she is peripatetic for this), better information for pupils in Year 9 (she is working on this) and more time for work placements.*

- *She is linking with the local college this year for the purposes of internal standardisation which she hopes will 'put more pressure on colleagues to get it right'.*

5.5   Summary

At Otium Community School, it has been acknowledged that this has not been a successful course change and the unsatisfactory inspection outcome was not unexpected. However, the course leader is determined to make a success of it - example LE8 summarises what needs to be explained.

Example LE8: summary of judgements on leisure and tourism at Otium Community School

This course has been introduced since the last inspection.

Overall, the quality of provision in L&T is unsatisfactory.

Strengths

Attainment is above average and achievement is good in the unit 'Investigating leisure & tourism' (Unit A for GNVQ, Unit 1 for GCSE(V)) where nearly all pupils on the course have gained at least grade C standard. A few achieved higher grades.

Some teaching is very good, particularly in Unit A/1; assignments on this unit provide effective opportunities for pupils to apply their basic knowledge and research into local facilities.

Areas for improvement

Overall attainment, which is below average, and achievement, which is unsatisfactory.

Standards in 'Customer service in leisure and tourism' and 'Marketing in leisure and tourism'; the teaching for these two units is generally unsatisfactory and needs to be more focused on specification requirements.

Monitoring and support for pupils' progress; too often pupils are left to carry out research activities without appropriate guidance – weaker pupils are insufficiently supported.

Internal standardisation procedures for portfolio work to check pupils' progress and coverage of the specification.

6   CONSTRUCTION

The examples that follow are for a hypothetical secondary school, where a link course in construction has been provided for three years with a hypothetical FE college. The link course was established to motivate otherwise disaffected pupils at Key Stage 4. The college has accreditation for NVQs in construction and pupils are working on NVQ units at level 1. The school, in conjunction with the college, has thereby provided an alternative curriculum pathway for these pupils.

6.1   Standards and achievement

Example CB1: discussion with a group of 4 Year 10 students who have been learning about exterior paintwork techniques and provided with the opportunity to practise

The pupils feel that they are attending the course more regularly than they would have attended school. They also appreciate that they are learning about something that would not be taught at school. They enjoy the college practical workshop facilities. They are aware of the hazards and risks of injury when working in the workshops and can extend this perception to the potential dangers on a construction site. One pupil volunteers that it is the responsibility of everyone using the workshop to avoid creating hazards and so minimise the risk of injury to others. All pupils understand the need for protective garments and they are able to recite the sequence of operations required to paint fresh timber. They comment on the need to avoid paint contact with the skin and particularly the eyes. A discussion takes place concerning the smells of the various coatings and the individual pupils' preferences or dislikes. With one exception, all pupils express their distaste for cleaning their tools and the workplace after the practical sessions.

The pupils have gained a good understanding of the need for preparation of the workplace, materials and tools. They have some appreciation of health and safety issues concerning physical hazards in the workplace. There is some understanding of the chemical hazards of the various coatings, though pupils' main concern is the manner in which stains on their skin or clothes could affect their appearance. The group seem to be unaware of the particular chemical hazards associated with wood preservatives. The risks associated with solvent-based materials, particularly in confined spaces, are not understood.

Commentary

The discussion has revealed that the school's strategy for improving attendance and achievement has had some success. The pupils demonstrate levels of self-esteem higher than those that might be expected in disaffected, non-attending pupils. They are learning skills they feel will be of use to them. However, they have insufficient knowledge of the complete range of health and safety risks associated with this type of work; this is a serious matter that the college will need to address.

Example CB2: 8 of the Year 11 link pupils working towards the final finish coat of plaster on interior plasterboard cavity walls; the walls are simulated in individual bays in the college workshops; 2-hour session

Context. The pupils have made stud-work frames on to which they have secured plasterboard. The initial coat of plaster has been applied. The pupils are completing the plastering process.

Most pupils are correctly attired and appear well motivated. The bays provide an opportunity for individual pupils to work without distraction from others. There are two pupils who use the recess of their bays to read whenever the teacher leaves their side of the workshop. These two pupils have left their initial coats of plaster to 'go off' without providing a key for the final coat. The pupils are required to prepare their own plaster before application. The plaster is prepared with good humour by all the pupils, but some are more careless than others when measuring the ratio of dry plaster to water. The bulk of the group apply their final coats of plaster with confidence and good levels of practical skill. One pupil experiences difficulty in producing a suitably smooth and flat coat, as his float has not been cleaned before use. One of the pupils who had not provided a key on his initial coat is struggling to produce a final coat as his plaster was not mixed to the correct ratio with water – too little water was added initially. This is compounded by the plaster starting to 'go off', because he is working very slowly. As the pupils complete their final coat, they clean their tools and work areas promptly. By the end of the session, five of the pupils have produced plasterwork of a good standard. The provision of good workshop facilities has allowed them to develop their practical skills. The teacher has instilled a good sense of self-discipline in the majority of the group.

[Attainment is above average for a level 1 course, but below the national average for the full ability range in Year 11 (5)]

Commentary

The overall outcome for this group is above average for this level 1 course. It shows good achievement, particularly within the context of pupils' background and previous history at the school. Two of the pupils may benefit from having their non-compliant behaviour challenged, although there is a need for a fine balance between trying to improve their performance and keeping them involved in constructive learning. The performance of two of the pupils is below average in contrast to

the majority of the group. Section 1.5 explains why attainment is graded 'below average' for this work in Year 11 (whereas the same work would be graded 'above average' post-16).

6.2   Teaching and learning

Lessons in construction invariably have little extended 'teaching' by the teacher. Much of the activity is practical work conducted in workshops after a short introduction and practical demonstration by the teacher.

Example CB3: a group of Year 11 pupils learning about techniques used to prevent ingress of water and damp into buildings; 1 hour

Context. Pupils have conducted experiments (at their own school) to establish the porosity of small pieces of building materials. The teacher at the college is describing construction techniques used to prevent water damage to buildings. The lesson takes place in the college workshop, which has workbenches with desks and chairs at the front of the workshop.

Using a small-scale, three-dimensional model of a section of roof adjoining a chimney, the teacher explains the techniques used to apply lead flashings. Pupils are provided with small pieces of lead and forming tools and they are instructed to practise forming shapes on wooden blocks. The group take to the task with enthusiasm. Three pupils use the forming process as an opportunity to beat a rhythm at their workbenches. The teacher rapidly intervenes and the pupils respond positively. The pupils are called back to the front of the workshop and they are asked to wash their hands, which they do in orderly fashion at the workshop sink, and they return to their desks. Through a question and answer session, the teacher prompts the pupils to recall the materials and techniques required for the application of lead. Pupils respond cheerfully to this technique. The teacher issues a photocopied sheet of the section of a roof to the pupils and asks them to complete the labelling of the ceiling joist hangers, ceiling joists, rafters, battens, roof tiles, felt lining and roof insulation material. The pupils start the task reluctantly. One pupil continually asks for the spelling of words, to the distraction and increasing amusement of the remainder of the class. As the pupils are completing the photocopied sheet, the teacher draws a cross-sectional view of the footings and lower part of the exterior cavity wall of a brick-built building on the whiteboard. He uses coloured pens, shading and cross-hatching to identify and label the concrete foundations, hardcore, brick courses, damp-proof course, air brick and wall ties. He calls the class's attention and describes the structure of the building foundations and the purpose of the individual labelled components. The pupils are less interested than they were previously. There is little response from the majority of the class to the teacher's questions, although one or two pupils keep the discussion going until the drawing has been fully described. The teacher issues a photocopied sheet of a similar diagram without labels and asks the pupils to complete the labels. The sheet also contains incomplete sentences that the pupils are required to complete. The pupils carry out the task of labelling the sheet slowly and with a certain amount of unrelated chatter. The teacher moves from pupil to pupil to assist with reading and explanations of the meanings of the incomplete sentences. The lesson concludes with the majority of the class not having completed the sheet. The teacher sums up and requests that the pupils complete the sheet for homework.

[Teaching and learning satisfactory (4)]

Commentary

The lesson covers the structural detail of construction work. It provides quite well for students of this level of attainment. The workshop-based work follows on well from the school-based work. The teacher makes the most of a subject that is difficult to deal with at this level. The teaching starts well, with good use of resources, and captures the interest of the pupils. This helps the students attain well initially. The following use of photocopied sheets twice by the teacher leads to the loss of motivation by a number of pupils. There is a fall-off in learning as a consequence. An audio-visual resource, such as a video illustrating the details in a real building, might have helped the teacher to improve the teaching during the latter half of the lesson. In turn, this may have helped the students sustain their interest and commitment to learning for longer.

6.3   Summary

As explained in section 1.5, reporting of such courses is likely to be brief. Where there is sufficient evidence, there should be overall judgements on attainment and achievement and on teaching and learning. Where such provision features in the curriculum, it is often intended to boost pupils' motivation for learning. The success of such intentions should be evaluated and reported.