Office for Standards in Education

Vocational A levels: the first two years

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Introduction

Purpose of report

1. This report evaluates the quality and standards of the Advanced Vocational Certificate of Education (AVCE) in a sample of sixth forms in schools, general further education (FE) colleges and sixth form colleges. The report covers the findings of a one-year survey by Ofsted of the AVCE following the introduction of the Curriculum 2000 reforms and the replacement of the General National Vocational Qualification (GNVQ) advanced by the AVCE. The background to the introduction of the AVCE is outlined in Annex 1. The subjects available are listed in Annex 2.

2. The structure of the report follows the seven key questions of the Common Inspection Framework used by Ofsted.

Survey

3. During 2002/03, 11 of Her Majesty's Inspectors (HMI) and 12 additional inspectors made 78 visits to a sample of 45 colleges and 9 secondary maintained schools in England (see Annex 3). Eight subjects were monitored: science, construction, engineering, business, information and communication technology (ICT), travel and tourism, health and social care and art and design. Inspectors also studied the findings of section 10 inspections of sixth forms in secondary schools and college inspections during 2002/03. The survey involved observations of teaching and learning and discussions with managers, teachers and students. In some cases, the schools and colleges were visited twice to monitor progress. Inspectors also sought the views of employers and higher education (HE) institutions.

Summary

4. Most of the work seen for this survey was satisfactory or good. Teaching, for example, was generally effective. The observations undertaken specifically for this survey were broadly consistent with the findings of school and college inspections, where these have focused on AVCE teaching. However, the proportion of unsatisfactory teaching, at 13%, was much higher than in the 16 to 19 phase generally.

5. Students were generally well supported at a personal level, though the provision of additional learning support is not always effectively targeted, and their achievement is usually satisfactory. Pass rates for the AVCE are lower than for General Certificate of Education Advanced Subsidiary (GCE AS) and Advanced (A) level, but this reflects the generally lower prior attainment of the candidates, and suggests that standards have not been lowered. Where value added data were available, they showed that students' achievements were broadly those predicted on the basis of their prior attainment, or a little better. Teachers were able to refer to

candidates, who would not, in their view, have achieved an advanced qualification had it not been for the AVCE.

6. The AVCE is, nevertheless, not a popular qualification with learners, and it is doing little to achieve the objectives of Curriculum 2000. Take-up is low, and though the qualification is intended for a broader range of ability than GCE A level, there was a tendency for colleges to raise entry requirements in the belief that the AVCE was more demanding than the GNVQ advanced. Few students broadened their curriculum by studying a combination of AVCE and GCE AS and A levels; in many cases, the timetabling arrangements of schools and colleges militated against such flexibility.

7. The AVCE is not well designed. It is neither seriously vocational, nor consistently advanced. The aims of the AVCE are not clearly understood by many teachers and students. We observed a good deal of work that was trivial, as well as some that was excessively demanding. In some subjects, moreover, course specifications lack vocational content and are therefore too similar to GCE A level. Little use is made of work experience, though where that is well planned it transforms what can often be mundane provision. The teaching of the key skill of ICT was usually effective, that of number and communication was poorly integrated into courses and was generally unsuccessful. Therefore, although a great deal of good teaching and learning was seen during this survey, it was achieved despite, rather than because of, the nature of the new qualification.

8. Teachers were particularly constrained by the AVCE assessment requirements. Both they and students regard the assessment regime as excessively complex, bureaucratic and hard to understand. They are right. The Qualifications and Curriculum Authority (QCA) has on several occasions attempted to address this issue, but teachers still spend too much of their time assessing, rather than teaching, students. For their part, students spend too much time completing assessments rather than learning. As a result, it is often difficult to cover the whole content of the course, and the learning lacks depth, in that an understanding of key overarching concepts is not developed. Repeated administrative changes and errors have done nothing to create confidence in the qualification or in those responsible for designing or implementing it.

Part A. Main findings

Achievement and standards

- Most students succeed but pass rates are significantly lower for AVCEs than GCE AS and A levels.
- Relatively few students get high grades compared with other qualifications.
- Too few students achieve key skills awards, other than in information technology (IT).
- The majority of full-time students progress to courses in HE institutions.
- Many students struggle to make the transition from a GNVQ intermediate to an AVCE course.

Quality of education

- There are large differences in the quality of teaching between subjects and between institutions.
- Assignments often lack vocational realism and relevance and do not extend the more able students.
- Few students have sufficient opportunities to take part in work experience.
- The timing and duration of external assessments restrict the ability of teachers to plan lessons which address the needs of all students in their classes.
- Students' access to ICT facilities varies unduly.
- Many teachers, especially in schools, lack recent industrial experience.
- The assessment criteria are too inflexible and bureaucratic and unit tests are often poorly designed.
- Students' work is assessed regularly, but there is a lack of consistency in the grades awarded to students for work of a similar standard.
- Recruitment to AVCE courses in many general FE colleges is low and declining, but some sixth form colleges and schools recruit well.
- Contrary to the intention of Curriculum 2000, few college students study a combination of AVCE and GCE AS and A levels, although many school students take 3-unit or 6-unit awards alongside GCE AS and A levels.
- Support for students is generally well managed and effective.

Leadership and management

- Few schools and colleges carefully measure the cost-effectiveness of their courses.
- There are unacceptably large differences between the best-run courses and the worst and too much curriculum planning is undertaken at the last minute.
- Quality assurance arrangements are inconsistently applied.

Issues for action

Action by QCA

QCA needs to:

- review the specifications of AVCE courses to reduce the emphasis on compliance procedures and to allow teachers to set more imaginative assignments
- ensure greater clarity about the standards needed for students to gain high grades
- increase the vocational skills component of most courses
- make work experience a mandatory course requirement
- harmonise the demands on students studying the first year of the AVCE course with those for students on GCE AS and A-level courses.

Action by awarding bodies

The awarding bodies need to:

- review the deadlines for centres to submit their work so that teachers have more flexibility to plan and teach the courses
- return samples of students' work to schools and colleges more quickly
- reduce the dependence on the Internet as a means of communicating important changes with providers
- improve the quality of multiple choice and short answer question papers where they are used
- ensure comparability of standards between institutions for individual subjects
- help teachers improve their knowledge and understanding of grade boundaries
- monitor the appropriateness of providers to offer AVCE courses.

Action by schools and colleges

Schools and colleges need to:

- ensure all students receive appropriate careers education guidance before they start an AVCE course
- introduce value added measures and individual targets for all AVCE students
- provide better support for teachers who have not previously taught AVCEs
- review the cost-effectiveness of AVCE courses.

Action by teachers

Teachers need to:

- share good practice more effectively and systematically
- update and increase their own vocational experience
- ensure that work experience and opportunities for students to have direct contact with employers are placed at the centre of the teaching scheme of work.

Key stakeholders' views of the AVCE

Students

What they like about AVCE courses:

- very helpful and supportive teachers
- the emphasis on coursework rather than passing examinations
- good support from teachers when applying to HE institutions
- the opportunities to carry out individual work
- the visits that are organised as part of the course
- the wide range of subjects covered
- the emphasis on practical work.

What they feel could be improved:

- the lack of specific textbooks for several AVCE subjects
- the suitability of courses to aid students' progression to HE
- the amount of coursework required and the bunching of deadlines for assignments
- the use of industrial visits and work experience to make the course vocationally relevant
- recognition of the AVCE by employers and HE admissions tutors
- the relevance of key skills.

Schools and colleges

What they like about AVCEs:

- it is a course that many students not suited to GCE can succeed on
- the progression links with HE institutions.

What they think could be improved:

- the clarity over the standards required at pass/fail thresholds

- the complexity and consistency of the assessment requirements.

Employers and HE institutions

What they liked about AVCEs:

- the students are keen and hardworking
- they help students develop their organisational, word-processing and oral skills
- they help students develop the ability to work independently and meet deadlines.

What they felt could be improved:

- the development of students' critical thinking and analytical skills
- the literacy and numeracy skills of students.

Part B. Standards and quality

Achievement and standards

How well do learners achieve?

9. Most students are successful on the AVCE. However, pass rates are significantly lower for AVCE qualifications than for GCE AS and A levels. In 2001/02, overall pass rates were 84.1% for the single award and 83.4% for the double award, whereas they were 97.2% for GCE A levels. Provisional figures for 2002/03 show a similar pattern, with overall pass rates of 83.3% for the AVCE single award, 85.7% for the double award and 95.4% for GCE A levels. Pass rates are also lower for AVCE than GCE in the same subjects. For example, in 2001/02 AVCE AS ICT had a pass rate of 69.2% compared with 87.0% for GCE AS ICT. Pass rates on AVCEs also vary between subjects. The AVCE single award in manufacturing had the lowest rate and performing arts the highest with more than a 20% difference in points. For AVCE AS courses, ICT had the lowest rate and health and social care the highest, and again the differences were wide.

10. Pass rates in schools and colleges are very similar for most subjects, but they are slightly lower in general FE colleges in business and ICT. Following recent revisions to the examination specifications, the weighting of external assessment has been significantly increased. Marks awarded for external assessments are often low compared with those for coursework, and this leads to a lack of motivation amongst students. In the most successful institutions, the proportion of re-sits is low and a culture of getting it right first time is stressed.

11. In general, girls do better than boys in most post-16 subjects but the gap is more pronounced in AVCEs. For example, in GCE AS business, the pass rate was 85.8% for girls and 84.7% for boys, while the comparable figures for AVCE AS business were 80.6% and 70.4%. Overall pass rates for the AVCE single award were 87.0% and 81.0% respectively compared with 97.7% and 96.7% for GCE A levels.

12. The proportion of students achieving the AVCE double awards in 2001/02 was lower than that for the GNVQ advanced-level courses they replaced in 2000/01, despite very similar numbers of candidates in both years. In some colleges and schools where students study for double awards, the course has been structured to enable the 6-unit award to be achieved after one year, with students deciding at that point whether to continue with the double award. This has improved pass rates on the double award compared with the GNVQ advanced as only those students who passed the first year of the course have continued. Since the change, pass rates have improved most in hospitality and catering and the performing arts and declined most in business and engineering. In 2001/02, pass rates among subjects continued to vary considerably from 67% in engineering to 92% in performing arts. There is

little difference between pass rates for AVCE double awards and for national diplomas in the same subjects.

13. In the institutions visited, the results of value added analysis show many students on AVCE courses perform as well as or slightly better than would have been predicted from their prior attainment at General Certificate of Secondary Education (GCSE) though relatively few students who progress from GNVQ intermediate achieve high grades. However, a lower proportion of students achieve high grades on AVCE courses than on GCE AS and A-level courses. The overall proportion of students achieving high grades fell from 58.6% on the GNVQ advanced in 2000/01 to 55.3% on the AVCE double award in 2001/02, while the proportion achieving a pass grade rose from 59.8% to 82.7%. The largest reduction in high grades occurred in business, health and social care and science. Lower proportions of students achieve grade A at AVCE AS and AVCE compared with those who sit GCE AS and A levels. In 2001/02, 22% of students achieved a grade A at A level compared with only 4% of students on AVCE. Some 20% of students on GCE AS achieved a grade A compared with 6% for the AVCE AS.

14. Students who study GCE AS or A-level subjects alongside their AVCE rarely achieve high GCE AS or A-level grades. Many, however, do gain additional qualifications directly related to their vocational subject, such as computer-aided design in construction and engineering, and first aid and food hygiene certificates in health and social care. In one college, the 3-unit AVCE ICT is used in place of key skills and of the 200 students who started the course, 90% were retained and over 80% achieved the qualification. Relatively few students achieve key skills awards other than IT.

15. In the best examples, nearly all students show a good grasp of underpinning concepts and basic technical language in individual units. They are confident and participate well in lessons and they develop good practical skills and use industry-standard resources competently. Their written work is at least satisfactory and some is very good. It is usually well presented with good use of ICT, especially in design-related subjects. In their second year of study, many students are able to relate their work to commercial or industrial situations effectively. Students develop their personal and social skills well and they speak confidently about their learning and achievements.

16. Too many students, however, complete their assignments using a narrow range of information and without sufficient analysis or evaluation so that they cannot achieve better than a grade E. Students' experimental work, personal sketchbooks and portfolios often lack originality. Student attainment is often lower in AVCE lessons than in GCE A-level lessons. Many students who progress from intermediate courses find it difficult to cope with the demands of advanced-level study and in particular the need to study for examinations outside of formal lessons.

17. A high proportion of full-time AVCE students progress to HE courses in related areas. However, rates of progression differ significantly from year to year and in a few schools and colleges, fewer than half of the students progress to full-time HE courses because of good job opportunities that arise. In some institutions, progression from year 1 to year 2 of the double award is poor, partly for this reason.

The number of students who progress from GNVQ intermediate to advanced-level has fallen in many schools and colleges, often because the entry criteria have been raised to ensure that students can cope with the new course specifications.

Quality of education

How effective are teaching and learning?

18. Most lessons are well taught, although the difference in the quality of the teaching between the best and the worst is very wide. Most lessons are purposeful and lead to worthwhile gains in students' learning. The teaching establishes a good basis from which students can build up their portfolios and complete their assignments successfully. Of the 141 lessons observed, 59% were judged to be good, very good or excellent; 28% were satisfactory and 13% were unsatisfactory or poor. These findings are broadly in line with the national picture for AVCE teaching gained from section 10 and HMI-led college inspections, but compare unfavourably with the national profile for GCE A levels and advanced level National Vocational Qualifications (NVQs).

19. Where teaching is good, lessons are well planned and teachers ensure that topics are taught in sufficient depth. In these lessons, schemes of work and lesson plans are carefully prepared and resources chosen to ensure that the planned learning outcomes are achieved. Teachers regularly make use of practical activities and group work. Students then develop good teamworking skills and confidently undertake realistic and challenging activities. At one school, a travel and tourism lesson aiming to develop understanding of how best to handle customer complaints had clear objectives, a logical structure, good pace and an effective question and answer session to check understanding. It ended with a good summary. The class remained focused and worked well in groups. All were able to reply to a complaints letter by the end of the lesson. The resource material used was relevant to travel and tourism and stimulated students' interest throughout the lesson.

20. In other effective lessons, practical teaching is well organised, and health and safety issues are properly addressed. For example, in construction students wear reflective jackets when carrying out practical surveying activities and risk assessments are completed carefully. In the classroom, workshop and laboratory, teachers effectively question students to check their prior knowledge and share their experiences with others in the class. In one well-planned construction lesson, the teacher used a mixture of video clips, handouts and questions to introduce the topic of underground drainage for domestic buildings. The students worked enthusiastically and by the end of the lesson were able to explain confidently and correctly the basic design principles and the regulations that applied.

21. Where teaching is less effective, lesson planning is poor and the teaching is often too prescriptive and mechanical. In these lessons there is little sense of involvement among students. Teachers interpret the syllabus too rigidly, working through the criteria in fear of missing a small part. In some schools and colleges, the timetable is too inflexible to allow students to undertake practical work. In others,

opportunities are missed for collaborative teamwork and little occurs. Sometimes work is poorly assessed. For example, at one college, superficial research was over-praised, misleading students about their level of attainment. There was too much reliance on secondary, rather than primary, sources such as newspaper and magazine cuttings. The analysis lacked depth and there was insufficient use of the students' own ideas to demonstrate their understanding and appreciation of the assignment they were working on.

22. Too many assignments are insufficiently demanding and do not extend the more able students, even though, following the change to AVCE, the scope for teachers to set their students open-ended assignments has been much reduced. Instead, assignments often require little critical thinking from students and too many assignments address much more effectively the needs of students who strive for a pass grade rather than those capable of obtaining merit or distinction.

23. The AVCE assessment requirements often restrict the opportunities for teachers to plan their courses imaginatively. Many AVCE specifications vary in their suitability for good lesson planning and imaginative assignment writing. For example, in travel and tourism, the mandatory introductory unit to the course is too lengthy and provides too little scope for teachers to adapt it to best suit the needs and interests of students. The result is too much classroom-based activity with an undue reliance on books rather than practical activities that make good use of vocational contexts.

24. The timing and duration of external assessments restrict the ability of the teacher to plan lessons which address the full range of abilities in the class. They also cause administrative problems for teachers and may impact on other courses or other units of the AVCE. In too many institutions, there is still widespread uncertainty over what precisely is the skill level and understanding that equates to a higher grade across the vocational areas. Some AVCEs, such as business, are now significantly more demanding than the GCE AS equivalent as the AVCE is assessed throughout at the second year GCE standard. This makes it difficult to plan a course that meets the needs of students distinctively and appropriately and in a way that GCE AS courses do not.

25. The teaching of IT key skills on AVCE is effective. In AVCE business, for example, IT key skills teachers set students well-designed business-related examples. This helps students to see why the acquisition of the skills is worthwhile. However, on most AVCE courses the key skills of application of number and communication are not well integrated. As a consequence, students often do not understand what they are doing or why, and relatively few achieve the certification. In science and art and design, there are some examples of effective integration of the three key skills. Where they are taught well, students value the key skills components and acknowledge how they help them improve their abilities to provide critical and evaluative insights.

26. Although IT skills are generally well taught, the use of ICT in lessons is not well developed on AVCE courses, apart from students selecting and downloading information from the Internet. It differs significantly from institution to institution, as much as between AVCE subjects. Sometimes the lack of access to computers when they are needed is a reason for the difference. In other cases, opportunities are

missed and some teachers expect IT to be used outside of timetabled lessons. College-based students generally have better access to computers than students in schools. Where teachers use ICT, it is sometimes unimaginatively done. For example, in one lesson, computers were used to work through test questions. This proved difficult to carry out as a group exercise. However, in one college a very good website was available to students who could also access the college intranet from home.

27. Where students have a planned work experience as part of their courses it is almost invariably successful and transforms the AVCE from a mundane and excessively textbook-driven course into one that is routed in the real world. However, too few AVCE students have sufficient opportunities to take part in work experience. Where they do, it is usually because of the close links their school or college has with local employers rather than a requirement of the course. Work experience is often included on health and social care and construction courses, but is almost non-existent in ICT. In a health education lesson, good use was made of students' understanding gained in the work place to answer questions about health and safety requirements in care homes. Where work experience is offered in travel and tourism and business, it is usually well integrated into learning activities. Schools and colleges make limited use of local employers to help students understand the world of work, but there is considerable scope for extending this further. In construction, for example, one group of students designed a new foyer for the offices of a local engineering company. They presented their designs to the managers of the company and their presentations were helpfully assessed as an integral part of their assignments.

How are achievement and learning affected by resources?

28. There are sufficient teachers to teach on AVCE courses, except in ICT. Full-time teachers are well qualified. Most have first degrees and the majority have relevant teaching qualifications. Teachers in general FE colleges have more specific vocational experience, especially in health and social care, ICT and travel and tourism. Teachers in schools and sixth form colleges often bring to AVCE courses a good understanding of advanced-level qualifications. Most part-time teachers are well qualified and bring up-to-date knowledge of industry and commerce to the courses they teach. Part-time teachers who have specialist knowledge in areas such as town planning and architectural design are used effectively on construction courses. In art and design, part-time teachers enhance the range of skills taught by full-time teachers. Support staff provide effective technical back up for AVCE courses in science and ICT. There are shortages of support staff, however, for art and design courses.

29. Too few teachers on AVCE courses have recent industrial experience. This is more marked in schools than in colleges. In AVCE health and social care, teachers have substantial sector experience, but it is often out of date. To overcome this, health and social care teams make good use of professionals from the sector to give talks to help teachers keep up to date and to provide materials for case studies. In construction and ICT, the industrial experience of teachers is often good and reasonably up to date. However, in business, science and travel and tourism, few

teachers have recent industrial experience. Staff development to update teachers' vocational expertise is often given low priority.

30. Generally, the quality of accommodation is good. Science laboratories, ICT rooms and construction rooms are usually fit for purpose. In art and design, the accommodation varies in quality, and access for students with physical disabilities is often inadequate. In many colleges and schools the accommodation for three-dimensional work in art and design is cramped and does not offer a good learning environment.

31. The range of specialist facilities is generally good. Students can use a wide range of modern equipment. Health and social care students usually have good access to science laboratories and equipment for the physiological and specifically health-related aspects of their courses. In the best travel and tourism facilities, students benefit from relevant, well-organised resources and opportunities to meet customers and to practice their customer service skills. Laboratory equipment for construction and science is at least adequate. There is often a shortage of relevant textbooks to help students on the health and social care courses that offer a wide range of optional units.

32. Students' access to ICT facilities varies too much. Most college students have good access to high-quality computing facilities and the Internet, but in too many schools access is restricted during lessons. Students on ICT courses can use up-to-date equipment and networking teaching facilities. The technology for communication between teachers and students is not used enough to track students' progress. There is little use of email between students and teachers, although in the best practice students on independent study can email teachers with queries about their work, submit assignments and exchange ideas about group tasks. Some schools and colleges are effectively developing intranet materials to support AVCE courses.

How effective are the assessment and monitoring of learning?

33. Assignments often lack realism and relevance to their subject. Students spend too much time seeking out and collecting primary data which is then not always effectively analysed or evaluated. The best assignments challenge students and are linked to real issues where there is plenty of information, both local and national, to inform the work. For example, in one business studies lesson, students used local information to investigate the case for and against a new runway at Heathrow airport. Students on the south coast worked effectively with a cider producer to investigate the potential to increase exports. In health and social care, some teachers set assignments which wrongly assume that students can gain easy access to busy health professionals.

34. Teachers in most institutions plan assessments carefully so that students have an even workload. When AVCEs were first introduced, the coursework workload was not well planned so that students and teachers reportedly experienced problems in completing and assessing the work. More recently, assignments have been broken down into clear short tasks, often building up from the lower grade criteria to higher

grade criteria in the later tasks. Students feel this helps them to understand the grading criteria.

35. Students and teachers regard the assessment system as excessive, complex and difficult to understand. The QCA, in partnership with the awarding bodies, has tried unsuccessfully on several occasions to address this issue but despite the recent changes to course specifications, teachers still spend too much of their time assessing students' work rather than teaching. Few students achieve a good proportion of high grades, sometimes because they fail to complete the criteria for a grade E before they attempt to satisfy the criteria for high grades. Teachers feel that the mid-May deadline for the submission of coursework has a detrimental effect on the quality of their students' work. They rush to complete units in time rather than teaching them to the appropriate standard.

36. Because the assessment criteria are too inflexible and time-consuming to complete, many teachers and students spend far too much time covering each aspect of the course rather than developing in depth an understanding of key overarching concepts. While for many GCE AS and A levels the work increases in difficulty as the course progresses, this is not usually the case with AVCEs. Instead, students' work is measured against the final standard from the start. As a consequence, many students find the transition from GCSE and GNVQ intermediate very demanding and while most succeed the numbers who find the transition too difficult is relatively high.

37. The unit tests are not fit for purpose on many AVCEs. For example, in art and design they limit the scope and quality of students' work being produced. In business, the external tests focus too heavily on the theoretical aspects of economics. This blurs the distinction between AVCE and GCE AS and A-level business courses. Vocational skills such as decision making and problem solving are not tested at all.

38. Students' work is assessed regularly, but there is inconsistency in the grades awarded to students for work of a similar standard. Teachers are not confident about the consistency of grades awarded as a result of sending work to awarding bodies for moderation because moderators' reports do not always contain enough explanatory detail as to why grades have been changed. Students' progress is tracked effectively. For example, in some colleges, progress is monitored electronically against the assessment criteria and shared with staff and students over the intranet. Internal verification of students' work is rigorous and well organised. Marking is generally constructive and accurate but does not always contain enough detail. Sometimes poor spelling and inappropriate use of statistics remain uncorrected.

39. Students have not been well served by the frequent administrative changes that have accompanied the introduction of the AVCE. Administrative mistakes still occur in schools and colleges and at the awarding bodies. The awarding bodies place too much reliance on the Internet as the primary means of communication with schools and colleges. The very late circulation of the most recent specifications, for use from September 2000, detailing changes to assessment requirements did not reach the

teachers who were going to use them until they returned from their summer holidays. This made advance planning impossible.

How well do the programmes and courses meet the needs and interests of the learners?

40. Provisional figures for 2002/03 show the number of entries to AVCEs increased by 13% compared with 7% for GCE A levels. However, the numbers of students who studied AVCEs were only 40,914 for the single award and 43,807 for the double award, compared with 750,537 for GCE A levels. Recruitment to AVCE courses in many general FE colleges is now declining, although some school sixth forms and sixth form colleges continue to recruit well. Many colleges and some schools have switched, or are proposing to switch, to national diplomas. For example, the number of school students who enrolled on the national diploma increased from 700 in 2001/02 to 1,600 in 2002/03. Some colleges have found that student numbers on advanced-level vocational courses have fallen as more schools have introduced vocational options in the sixth form and the numbers of students enrolling on AVCE courses continue to fluctuate widely from year to year.

41. Institutions apply their entry requirements for AVCE courses sensitively. In most colleges, AVCEs are part of a wide range of vocational courses offered from levels 1 to 3, whereas in schools, they are often used to broaden the study of those taking GCE A levels. The minimum entry requirements for AVCE subjects are usually four GCSEs at grade C, as they were generally for the GNVQ advanced. Some colleges, however, have raised the minimum entry requirements, especially in business and health and social care, to 5 GCSEs at grade C, because AVCEs are seen as more demanding than the GNVQ advanced they replaced. However, colleges usually consider each applicant's individual circumstances and some students are enrolled with lower grades. Schools generally require 5 GCSEs at grade C or above. Most AVCE courses are intended for full-time students aged 16 to 18, but in a few colleges the AVCE is offered to part-time and adult students. In engineering and construction, very few female students are recruited to AVCE courses, despite efforts by colleges, through open days and other activities, to increase their numbers.

42. Students often find it difficult to progress from GNVQ intermediate courses to AVCEs. Most colleges and schools require a merit grade at GNVQ intermediate for entry to the AVCE, compared with the pass grade previously required to enter GNVQ advanced. However, in subjects such as engineering and construction, applicants for GNVQ intermediate courses are often enrolled on the ACVE instead, because there are too few students for the college to run the GNVQ. Students who use the GNVQ intermediate as their entry qualification rarely have the opportunity to study the key skills of communication or application of number. The lack of clear progression opportunities from the GNVQ intermediate is of concern, especially as the number of entries at intermediate level rose by 42%, to 94,017 in 2002/03. Schools regard the AVCE as a good vocational progression route from Key Stage 4, especially where vocational Key Stage 4 options are available. It is too early to judge whether the introduction of new GCSEs in vocational subjects will increase the numbers of students progressing to AVCEs.

43. The majority of colleges offer both single and double awards, but many schools offer only single awards. Most students take the single award in their first year and the double award in their second year. Students in colleges generally prefer to take the double award as a subject-specific course of study, but in ICT, travel and tourism and business, some students take a single award in one subject and then a single award in another. In one college, the AVCE art and design double award was unpopular as a two-year course and retention was poor. It was replaced by a single award AVCE and retention and progression rates improved significantly. Most schools and many sixth form colleges offer a much narrower range of AVCEs than general FE colleges.

44. Contrary to the hopes that Curriculum 2000 would lead to a significant broadening of most students' curricula, few college students study a combination of AVCE and GCE AS and A levels to broaden their studies as most prefer to follow a vocationally related programme. A minority of colleges have a common-timetable matrix which applies across all subject areas. In the majority, however, students are not encouraged to mix subjects and most offer a limited range of additional subjects to choose from because of the requirements for minimum student numbers in an option and timetabling constraints. For example, in one college, GCE AS mathematics was the only subject that was available as a complementary course to AVCE students. Two students, therefore, studied GCE AS chemistry in an evening class at another college nearby. Schools generally offer a combination of AVCE single awards with GCE AS and A levels. The 3-unit and 6-unit awards have helped some small sixth forms to increase the range of their provision and the number of students participating in general education who would otherwise have enrolled on vocational courses. Many school students take 3-unit or 6-unit awards, especially in business and ICT, alongside other GCE AS and A levels.

45. Most college students study additional subjects which are closely related to their main study. For example, students in construction and engineering often study AutoCAD and some take additional units of mathematics if they wish to proceed to engineering-related HE courses. Art and design students usually take an additional vocationally-related GCE AS subject in their first year such as fine art, photography or critical studies. Students in health and social care take qualifications such as first aid while ICT students take additional qualifications such as C++ or Java. Some college students, but few school students, take units of NVQs alongside the AVCE.

46. In some subjects, course specifications lack vocational relevance with too much focus on theoretical concepts and are therefore too similar to GCE A levels. Students often have a limited choice of units to study because they must study a minimum number of externally examined units and only a few optional units are externally assessed. In one college, the small number of AVCE students are offered no choice of optional units and so some study units which are not directly relevant to their future career plans. Many general FE colleges are, therefore, considering the re-introduction of national diplomas to meet the needs of students who wish to follow vocational rather than academic courses of study. In business, science and ICT, similarities with GCE AS have led some schools and colleges to offer the GCE AS instead of the 6-unit AVCE.

47. In many schools and some colleges, first and second year AVCE students are, unhelpfully, taught together. For example, in one school, students from both years of a travel and tourism course were taught jointly for around half of the units, with some units taught separately for first and second year students alongside students taking ICT, leisure and recreation, and health and social care. This limits the teaching methods that can be used and fails to take sufficient account of the particular vocational aspects of the specialisms offered.

48. Students who succeed on AVCE courses have good opportunities to progress to HE. Most HE institutions require AVCE candidates to achieve the same number of points as those who study GCE A levels, and many students report that at HE interviews admissions tutors are unfamiliar with the AVCE award. The combination of coursework and external assessment on AVCE courses is seen by HE institutions as appropriate to HE study. However, some HE institutions prefer the AVCE single award combined with GCE A levels rather than a double award, which is perceived to be too narrow a course of study. There are insufficient opportunities to study mathematics beyond GCSE in most colleges and so many HE institutions consider the national diploma or GCE A levels to be more suitable for students who want to enrol on degree courses which have a strong mathematical content.

49. The majority of students are able to take part in enrichment activities and visits. For example, art and design students attend life drawing and specialist computer software classes and business students take part in Young Enterprise. One school has an extensive internally accredited compulsory enrichment programme. However, few students take part in these activities outside their main vocational area and their willingness to get involved is often restricted because many have part-time jobs. In some subjects, links with employers are underdeveloped and students make few industrial visits.

How well are learners supported and guided?

50. Support for students is generally effective and well managed. Most prospective students now receive good pre-course advice and guidance, mostly by those who teach the courses. Induction is usually well organised and most induction programmes help students to settle into their studies quickly. In one college, a useful student profile was created for each student, containing GCSE points score and initial assessment outcomes. However, in some schools and colleges, although the content of the course is carefully explained, students are not always made fully aware of coursework requirements soon enough or of the expectations teachers have of them.

51. In most colleges, an initial assessment is used to identify the additional learning support needs of full-time students when they start their course. Support for literacy and numeracy is usually provided in small groups, in lessons or at drop-in centres. In one college, AVCE construction students received very good one-to-one support for subject-specific topics as they arose. School procedures are less systematic. In schools and colleges, the arrangements for providing additional learning support are not always effective, however. Sometimes teachers do not know whether students attend the support sessions or what they study at them, and the work undertaken by

students at the additional support sessions does not always relate to their main course of study. There is too little use of initial assessment to identify the potential needs of part-time students. Few students take diagnostic tests to determine their IT skills.

52. Towards the end of the course, support for students wanting to progress to HE is usually excellent. However, the support varies for those students who wish to enter employment with training using the knowledge and skills they have gained on the course. In some institutions, teachers make very good use of their extensive network of industry contacts to help students find a suitable employer. At others, students receive only limited support.

53. The support provided to students whose first language is not English differs unacceptably among institutions; it is highly effective in some and inadequate in others. Where it is most effective, schools and colleges provide language support for students as and when required, but such support is not universal.

54. Teachers usually monitor students' attendance and punctuality effectively. Attendance rates on AVCE courses are similar to those overall for schools and colleges, but punctuality was poor on a minority of the courses observed.

Leadership and management

How far do leadership and management succeed in raising achievement and supporting all students?

55. The AVCE courses in the survey provided satisfactory value for money. Few schools and colleges, however, measure the cost-effectiveness of the courses carefully enough. Many do not have a clear understanding of the difference in costs involved in, for example, extending the provision within the AVCE to foundation and intermediate level as compared with the cost of introducing a new AVCE subject or moving to a national diploma. Most courses meet most students' needs at least adequately and allow them to progress onto either more advanced work or into jobs with training in the industry. Too few students improved their vocational skills sufficiently.

56. Leadership and management are satisfactory on most courses although, as with the teaching seen, the difference between the best and worst run courses is unacceptably wide. The most important challenges centre on raising student achievement further. Other important priorities include improving curriculum planning to make the courses more vocationally relevant and coherent, increasing opportunities for work experience and providing better support for teachers who are new to teaching AVCEs, not least through better sharing of good practice.

57. Most senior managers and other staff responsible for ensuring that AVCEs are well taught appreciate that while the qualification is working well for some students, it is not doing so for all. One of their most important tasks is to improve retention and achievement not least by increasing the number of students who achieve high

grades. Similarly, many of the assignments students are set could be cast much more imaginatively and in ways that better meet the needs of the most able students. While many courses develop ICT key skills effectively, other key skills such as numeracy and communication are relatively neglected. Better support is still needed for the most vulnerable students.

58. Fitting the AVCE into a GCE AS and A-level driven curriculum is an additional problem. Course assessment requirements can make the imaginative teaching of some units of work more difficult, though not impossible. Almost all staff spoken with expressed their concern that the courses did not make as effective a use of work experience as they would wish. Several staff spoke of the practical difficulties in doing so, citing school and college timetables as well as the course specifications as reasons. While the new assessment arrangements have reduced the time most teachers spend marking work, most still spend considerably more time marking, moderating and reporting on students' progress than they do on planning the course and reviewing its impact and effectiveness.

59. Where leadership and management are effective, courses are carefully planned and thoroughly evaluated to establish how well they meet students' needs. Schemes of work go well beyond the simple sequencing of the courses' specifications and individual lessons have clear learning objectives which are regularly reviewed and adjusted. Challenging targets for retention and achievement are set and met. The course self-assessment and review processes are effective in bringing about improvement. Course reviews are thorough and there is good analysis of individual student performance. Students' views are used effectively to inform course planning. Course teams hold regular meetings that focus on the progress of students. There is good support for new staff. Quality assurance procedures are rigorously applied and lead to the production of detailed self-assessment reports and action plans. Only about a half of the courses in the survey had most of these characteristics.

60. In many of the less successful institutions, too much of the curriculum planning is undertaken at the last minute. In some cases, because communication across the school or college or with the examination boards is unsatisfactory, there is much last-minute timetabling and too many changes in staffing. Effective communication with part-time teachers continues to be a shortcoming in both schools and colleges.

61. Quality assurance arrangements are inconsistently applied on many courses. In most institutions, self-assessment reviews acknowledge some areas of weakness; in particular, the induction and support arrangements for teachers who are new to teaching AVCEs. The monitoring of the quality of teaching is often superficial. Teachers do not often sit down together to consider how well the course meets students' needs and which areas need improvement. Decisions about whether to continue with the course are often taken before, rather than after, discussions with those teaching it. There is also a need to share good practice more effectively but, as yet, too few institutions have sufficiently well-developed structures and quality assurance arrangements to enable it to happen. Better use of value added analysis is still needed to compare the performance of students with what they are predicted to achieve, based on their GCSE scores when they enter the course.

Part C. Curriculum areas

The following subject profiles are findings from the analyses of national data on students' achievements, institutional inspections undertaken by Ofsted and visits to the institutions listed under Annex 3.

Art and design

Key strengths

- mostly good or very good teaching
- students' good attendance
- some high-quality work by students
- excellent specialist accommodation and equipment in many colleges
- good tutorial support by vocational tutors.

Areas for improvement

- opportunities for experimentation and problem solving
- teacher and student knowledge of creative industries
- the burdensome system of assessment
- access to computers and their maintenance.

Evidence base

62. The change from GNVQ advanced to AVCE led to a fall in enrolments from 4,402 on GNVQ courses in 2000/01 to 1,496 on AVCE courses in 2001/02. There was little change in the number of enrolments on national diplomas. GCE A-level art entries increased from 32,249 in 1999/2000 to 32,915 in 2001/02 and GCE AS from 2,529 to 49,883 in the same period. Inspectors visited seven general FE colleges. Between them they had 175 AVCE enrolments in 2001 and 207 in 2002. Most students studied full time.

Achievement and standards

63. In 2001/02, the pass rate on the AVCE double award, at 89%, was very similar to that of the GNVQ advanced in 2000/01. The pass rate for the national diploma was slightly higher. Similarly, there was little difference in the proportions of students who were awarded high grades on the GNVQ advanced and the AVCE.

64. There were large differences in performance between institutions visited. For the AVCE double award in 2001/02, the average pass rate of all the institutions visited was 75% and the retention rate was 55%. However, pass rates in the institutions varied from 100% to 30% and retention rates from 90% to 30%. The average attendance was high, at 86%, against the national average of 77%.

65. Where student attainment is high, it is associated with new assignments that build on previous success. Many students display good examples of experimentation and their sketchbooks show the development of ideas and visual language. There is often a good standard of life drawing. In one college, the display of AVCE students' ceramic work showed exciting work that was well above the required level. Students confidently discuss their own work and that of others. Research, analysis and evaluation are often good. Some students' key skills portfolios are of a high standard with the work closely related to their art and design studies. In a few colleges, attainment was low, work was unambitious, there was little drawing and design elements were weak. Contextual research is satisfactorily integrated into practical projects, but critical discussion is often poor.

Quality of education

66. In 2001/02, during institutional inspections nationally, over three quarters of the AVCE lessons observed were judged good or better and very few were less than satisfactory. A similar pattern was observed in the institutions visited. Most teachers plan their lessons well, are enthusiastic and use varied and challenging teaching methods. In the best examples, they create a strong atmosphere of serious, lively work. Their questioning is appropriate and they demand high standards of finish and concentration from students. Relationships between teachers and their students are positive. At one college, students developed good awareness of contemporary art and design through projects developed with the Liverpool Tate. Learning needs are differentiated in most lessons. Many teachers successfully write assignments which allow students to develop their individual interests. In one college, teachers used innovative approaches to learning. Students were encouraged to experiment and they responded without fear of failure. In a life-drawing class, inexperienced students tackled a novel and demanding range of drawings with energy. As they progressed through the task, their mark making became more vigorous and spontaneous; they were encouraged to disregard imperfect lines and marks, resulting in all students understanding the concept of composition within a limited space.

67. Where teaching is less effective, lesson plans are often inadequate and teaching is over-prescriptive. Much teaching lacks creative excitement. Where the provision is small, with few specialist teachers, lessons are sometimes too narrowly focused. The teaching of key skills was excellently integrated into the vocational

work at one college, but was poor at two other colleges. At one college, superficial research was overly praised, misleading students about their level of attainment. Some teachers set assignments which require students to use magazine cuttings and experiment with media without any real purpose.

68. Specialist accommodation and equipment are often very good. One college provided an excellent studio and Internet access in all classrooms for students to use independently. There are excellent displays of students' work in many institutions. However, in one college, painting and 3D shared an inappropriate studio and there was excessive noise from adjacent music classes. In another, a new building was unsuitable for disabled students; many doors were not automatic, desks were unusable and corridors too narrow for wheelchairs. Students have good access to college libraries but limited access to design-specific IT, which hinders the development of technical design skills. Computers are not always well maintained. Most teachers are well qualified, but there is a shortage of those who can teach graphic design and multimedia.

69. Assessments are generally regularly set and students understand the grading criteria. Students are well supported and meet regularly with tutors for individual tutorials, which include portfolio reviews. Teachers give students regular constructive verbal feedback and make good use of individual learning plans. However, some written feedback is not detailed enough to inform students of what they need to do to improve. External tests lack clarity and consistency and assessment is too time-consuming which limits the scope of work and depth of study. Teachers receive little support from awarding bodies.

70. Many students take an additional vocationally related GCE AS or A level alongside their AVCE. Enrichment programmes sometimes include classes in life drawing or specialist computer image manipulation. However, in 2003/04, many colleges plan to offer national diplomas, or a 6-unit AVCE followed by the art foundation diploma, instead of the 12-unit AVCE. This is because the need for students on AVCE courses to produce specific evidence is seen to discourage experimentation and the development of essential problem-solving skills. HE institutions often prefer students to have studied the art foundation diploma course.

71. There is good pre-course advice and guidance. Induction is effective and frequently involves trips to galleries and sites of interest and group activities. Students often take tests on entry to identify their additional learning support needs. In one college, the support materials were carefully related to the specific needs of AVCE art and design students. Occasionally, students are accepted on portfolio evidence rather than their GCSE results. Tutorials are available on demand for all students. Many colleges regularly report students' progress to parents. Some students suffer financial hardship because of the high costs of materials which they must purchase.

Leadership and management

72. Teachers benefit from well-organised curriculum development and standards training. In one college, teachers were able to take part in five industrial updating

days each year. Generally, however, teachers have limited knowledge and experience of the creative industries. Few teachers on AVCE courses have links with external organisations and the use of visiting speakers from industry is rare. Work experience is conspicuous by its absence.

Business

Key strengths

- high pass rates in schools
- generally good retention rates
- basic business concepts well understood by students
- successful assignments where students have close contact with local businesses
- good progression to HE business courses.

Areas for improvement

- low pass rates on the double award in colleges
- external tests which focus too much on economic theory at the expense of business practice
- too much descriptive teaching
- restrictive range of teaching methods resulting from the high level of course content to be covered
- no required assessment of vocational skills.

Evidence base

73. The AVCE in business attracts over 25% of all candidates for both the double and single awards. In 2002, nearly 11,500 candidates were entered for the double award, over 7,500 for the single award and almost 3,800 for the 3-unit award. In the same year, there were 40,774 and 32,290 entries respectively for GCE AS and A-level business. The survey of AVCE business covered four schools, two sixth form colleges, and four general FE colleges. All the schools visited offered the single award; two additionally recruited to the double award. All the general FE colleges offered the double award; two offered both single-award and double-award routes. Three institutions offered the 3-unit award. One college offered a part-time evening-study route, with additional workshop support provided on a Saturday morning. The general FE colleges were planning to revert to the national diploma award in

business, which has been re-launched, from September 2003, believing it to better suit the abilities of students traditionally enrolling in this type of institution.

Achievements and standards

74. According to data for 2002, the pass rate for the double award in all schools and colleges was 81.9%, with achievement significantly higher amongst females than males. A similar pass rate of 81% is recorded for the single award; it is lower for the 3-unit award at 75%. These figures compare with an 85% pass rate in the same year for GCE AS business and a much higher figure of 96% for GCE A level. The proportion of A grades in GCE A-level business at 11% was lower than for all subjects, it was even lower for the single AVCE award, at close to 3%. Only 2% of candidates gained two grade As in the double award.

75. In the institutions visited, pass rates in schools were mostly close to or better than national figures in 2002. In one of the sixth form colleges, a high pass rate of 92% was recorded. Achievements in the general FE and tertiary colleges were more variable and often below national benchmarks, especially for the double award. Most colleges reported that AVCE achievements were lower than those for the precursor GNVQ advanced award, because the assessment of the new qualification was more exacting in terms of the theoretical and conceptual knowledge required for the external tests. Retention rates in 2002 were mostly good but with some wide variations, ranging from 47% in one of the sixth form colleges to 100% in three institutions. Attendance in lessons was satisfactory, averaging 85%, but generally higher in schools.

76. Opportunities for students to progress to HE are good with those applying being offered realistic UCAS points scores for degree courses in business. Some universities are making offers based on grades rather than points achieved, thus excluding achievements in key skills.

77. Students show a good grasp of basic concepts and vocabulary. Assignment work in Year 13 more effectively links business theory to practice; in Year 12 a much greater emphasis is placed on business principles. Too much of the work set for students is overly descriptive with insufficient analysis and evaluation. Where an evaluation is undertaken by students, comments from teachers focus more on the activities undertaken rather than how far initial objectives are being met. Not all awarding bodies require students to declare that work submitted for assessment is entirely their own. Too many assignments in colleges are written at E-grade standard. As a consequence, pass rates in colleges are often low for the double award.

Quality of education

78. The teaching profile for the institutions visited was less favourable when compared to national data for the area of learning as a whole. In total, 52% of teaching was judged to be good or better, compared to 64% nationally. A larger proportion than nationally was satisfactory and only one of the 29 lessons was

judged unsatisfactory. The profile for learning was slightly better, but for attainment slightly worse.

79. Lessons are generally well planned and organised; in the best lessons, students are given ownership of the learning. In one lesson, for example, students in groups were brainstorming ideas to improve customer service in Marks & Spencer (the teacher was a former store manager). They presented their ideas using acetates on an overhead projector with the teacher probing the realism and practicality of their initiatives. The acetates were collected so that the teacher could produce a whole-class response to the question. The teacher went on to examine the potential responses required to achieve higher grades. Some of the tasks set do not always extend and challenge the most able students; teaching in Year 12 is sometimes closer to GCSE standard. Lesson content appropriately covers specifications but the requirement to cover a large amount of subject content constrains the range of teaching methods used. Work experience, where it is offered, is well integrated into learning activities. Students' understanding of more complex business concepts is not sufficiently demonstrated. For example, one student could describe the theory of comparative costs but did not understand its relevance to international trade. Attempts are being made by staff to integrate key skills into activities but students are still sceptical about the value placed on key skills by HE institutions.

80. Students use ICT effectively, especially in assignment work. This includes, for example, the use of graphical analysis to interpret consumer surveys and spreadsheets to illustrate budget forecasting. In colleges, there are some good examples of well-developed business intranets with a growing number of learning materials and external links. Teachers are well-qualified academically although they often lack recent and relevant industrial experience.

81. Assessment focuses heavily on academic criteria such as knowledge and understanding at the expense of vocational skills such as problem solving and decision making, thus blurring the distinction between GCE AS or A-level business and the AVCE award. Some of the external tests place a strong emphasis on knowledge of economic theory at the expense of business practice. The assessment criteria encourage a descriptive approach since all of the E-grade criteria need to be covered before candidates can be considered for a higher grade. Assessment-criteria sheets are typically used to inform the grades awarded; assignments are often structured with stepped tasks, inclined in difficulty.

82. In the case of one school, the move to the 6-unit AVCE award away from the precursor 12-unit GNVQ advanced has resulted in links with the local general FE college being curtailed. This is because the more specialised vocational units in the GNVQ advanced are not now required to be taught. Although work experience is only provided in a minority of institutions, Young Enterprise formed a more significant enrichment activity. The perceived additional academic rigour of the AVCE award on the part of colleges had resulted in the entry requirement being raised to five, rather than four, GCSEs at A* to C grades. The move back to the national diploma award is aimed at recruiting a broader ability range due to the greater emphasis on the development of vocational, rather than academic, skills. Support for students is effective, particularly through personal tutorials and individual review meetings. Careers guidance was regarded as good by students although it focused more on

meeting the needs of those applying to HE rather than those intending to progress to employment.

Leadership and management

83. In all the institutions visited, there was a clear commitment from senior managers towards the development of AVCE awards. In schools, the single award in business formed a popular choice in combination with other academic GCE AS and A levels. Quality assurance mechanisms, including self-evaluation, were better developed in colleges than in schools, where they were more rudimentary. Course organisation varied between institutions. In one college, four units were taught simultaneously making it difficult for students to manage these separate streams of work at the same time. The sequential teaching of units was more common. The absence of local teacher networks mitigated against the sharing of good practice and common approaches to the development of resource materials.

Construction

Key strengths

- students receive a broad introduction to the industry
- good progression to HE for successful students
- good opportunities to study GCE AS/A levels or NVQ qualifications alongside the AVCE
- students undertake practical and project work enthusiastically.

Areas for improvement

- teaching that is not sufficiently challenging or stimulating students
- poorly constructed written feedback to students that provides little guidance to help them improve their work
- low pass rates.

Evidence base

84. Few colleges, and no schools, offer the AVCE in construction and the built environment. Instead, many colleges have continued to offer national diplomas and certificates in construction, building services engineering and civil engineering so that they can combine full-time and part-time classes to maintain viable group sizes. In 2001/02, 417 students studied the double award, a slight increase in the number

of students enrolled on the GNVQ advanced in the previous year. In the same year, 287 students were enrolled on the national diploma. In the five colleges visited, the majority of students studied full time for three or four days each week over one or two years for either a single or double award.

Achievement and standards

85. The overall pass rate of 78% for the double award in 2001/02 was below the national average for all AVCEs. It was also slightly below the pass rates in the previous year for the GNVQ advanced and the national diploma. The majority of grades were at C or D, a similar profile to the GNVQ advanced. Retention rates, however, improved nationally with the change from GNVQ advanced to AVCE. Nationally, the attendance of students on AVCE construction courses is below the average for all AVCEs.

86. Pass rates in the colleges visited were good. In two, retention was very high, partly through the teachers' determined efforts to support any student who was considered at risk of leaving the course. The attendance, punctuality and timekeeping of teachers and students varied considerably in the colleges visited. In one college, it was exemplary, but in another it was unsatisfactory with students arriving late and lessons finishing early.

87. The standard of students' work observed was generally satisfactory and a small proportion was excellent. Most written work is well presented and much is word processed. Students undertake practical and project work enthusiastically. Many can produce drawings of structures and components to industry standard using computer-aided design packages when using information provided by the teacher. They develop a good awareness of the issues facing the industry such as the environment and the use of scarce resources. Students generally understand national standards and regulations, but they are not always able to justify how the requirements are met in their own design solutions. A significant minority of students work well below the level required for the stage of the course, suggest few ways of solving problems they are set and do not achieve as well as they could.

Quality of education

88. Most teaching on the AVCE is good or better, but too high a proportion is unsatisfactory. There was some very good teaching and learning in two of the colleges visited. In one lesson, students considered various options for the redevelopment of a site near the college. The teacher showed them a video of the area and a computer-generated presentation of possible designs and then provided up-to-date information for their use. The students concentrated hard throughout the lesson and by the end were able to suggest a wide range of innovative, yet feasible, designs. In another lesson, students who had visited a health and safety exhibition were asked to identify possible safety hazards in a range of realistic simulated working environments, many based in the craft workshops. The teacher effectively questioned each student, using his own knowledge of safe working practices, and made sure that they noted where they had made mistakes. At the end of the lesson,

the teacher reinforced what the students had learned by asking them questions in teams.

89. In some of the colleges visited, however, the teaching was dull and failed to stimulate students. Teachers often set exercises that did not challenge students enough to develop their ability to think and solve technical problems. There was little use of industrial and professional links to help students increase their knowledge of the industry and construction processes. In a couple of colleges, there was poor classroom management and those students who became bored were allowed to disrupt the learning of other students.

90. All the colleges visited had good accommodation and sufficient equipment. In one college, part of the sports field was used for practical surveying. In another, permission had been gained to use part of the local park. Both areas allowed students to put into practice the principles that they had been taught in the classroom and to develop their skills in using surveying equipment. Students have easy access to the Internet and technical information. In one college, students could use their own intranet, which contained study materials and assessment documentation. Most full-time teachers are technically qualified, but not all have teaching qualifications. They have industrial experience, but some of their teaching shows a lack of awareness of developments in the industry. Part-time teachers bring up-to-date knowledge of the industry.

91. Assessments meet the requirements of the awarding bodies. However, one college left most assessments until the end of the course so that students were required to produce large quantities of evidence in a very short time period. Although some assignment briefs provide students with realistic problems to solve, few teachers provide project drawings. In many cases, students' assignments only include enough evidence to meet the requirements for a grade E. Too often, teachers do not give enough feedback to students to help them understand the topic or improve the quality of their work. Moderators' reports do not always provide enough guidance to teachers.

92. Many students, particularly those in colleges with sixth form centres, were studying GCE AS or A levels or an NVQ as well as the AVCE. Most full-time students study key skills and many take part in enrichment activities. Many students progress to HE in related subject areas, but those who wish to study subjects such as civil engineering must often achieve an additional mathematical qualification. Some colleges are considering changing to the national diploma as they feel it better meets the needs of students who wish to progress to HE or gain employment.

Students get good guidance and support on entry, during the course and when they are considering employment or HE options. However, at one college, guidance was limited, because the AVCE was taught away from the main site.

Leadership and management

93. The structure and organisation of the AVCE course varies between colleges. In three colleges, students studied the same units for the whole year, but in the other

two, units were studied in one of two semesters. Students preferred this arrangement. In two colleges, students made good use of the college-wide timetabling arrangements to broaden their studies by studying GCE AS and A levels alongside the AVCE. Staff development activities and external events linked to specification delivery and changes in assessment had been useful for teachers. Where work experience is organised as part of the course, students benefit from the opportunity to broaden their subject knowledge and understanding of the world of work.

Engineering

Key strengths

- the practical approach to teaching meets the needs of students
- effective development of students' IT and practical skills
- good resources in computer-aided design (CAD) and computing.

Areas for improvement

- the insufficient use of individual learning plans to track and monitor student progress
- poor teaching in theory sessions
- low pass rates.

Evidence base

94. AVCE engineering is one of the least popular AVCE subjects. In 2001/02, 964 students took the double award, while in the previous year 1,014 students took the GNVQ advanced and 2,586 students took the national diploma in engineering. Inspectors visited four colleges. One college had over 40 students on the 6-unit AVCE, but in the other colleges the numbers of students studying the single award were small. Enrolments were also low for the AVCE double award, with 73 in 2001/02 and 56 in 2002/03. All the colleges offered both single and double awards, with the single award taken in the first year and the double award in the second year. None of the colleges visited offered the AVCE to part-time students.

Achievement and standards

95. The overall pass rate on the AVCE double award in 2001/02, at 67%, was much lower than the pass rate on the GNVQ advanced in the previous year, but similar to that of the national diploma. It was also significantly below the average pass rate for all AVCEs. A smaller proportion of students achieved high grades in the

AVCE than in the GNVQ advanced. However, pass rates were high on the 3-unit AVCE in engineering and were above the average for all 3-unit subjects. Retention rates remained very similar in the change from GNVQ advanced to AVCE, and are also similar to those for the national diploma. Nationally, students' attendance on the AVCE is close to the average for all AVCEs.

96. Pass rates in the colleges visited varied considerably; ranging from 70% to 20% for both the 6-unit and 12-unit awards. Similarly, retention rates on the double award ranged from 90% to 20%. Students' attendance at the colleges visited was just below the national average, at 76%.

97. Practical work produced by students was of a high standard. In most colleges, students quickly develop competence in the use of CAD equipment. Many students show a good understanding of key mechanical principles and are able to develop realistic and sometimes novel design solutions. They often prefer the practical approach of the AVCE to that of GCE A-level courses. Some students are able to operate machine tools confidently and produce components to good standards of surface finish and accuracy. Some students, however, do not spend enough time researching problems and use only a narrow range of sources of information. The quality of their written work is more variable. Many assignments are well presented, often with appropriate use of IT, but some contain too many spelling and grammatical errors. For some students, their low level of understanding of science and mathematics means they struggle to cope with some of the more analytical aspects of the course. Often they simply wait for mathematically based solutions to be presented.

Quality of education and training

98. The proportion of good or better teaching has increased over the last three years. However, the proportion of unsatisfactory teaching has also increased over the same period and is higher than the average for all AVCEs. The better teaching occurs in lessons that include practical work or computer-aided engineering. In these, the lessons are well planned and practical activities are well organised. For example, in one lesson, the teacher first quickly questioned each student about the properties of materials they had discussed in the previous lesson and clarified any misunderstandings before skillfully involving all the students in a discussion about how they thought the materials would perform for different uses. The students responded enthusiastically and then tested their hypotheses using a simple bending test and the examination of the failed engineering components. They then used the Internet to research information on other materials. In a CAD lesson, all of the students worked at their own pace on learning tasks or on one of the final assignments. The teacher had a good knowledge of the software package and helped all the students individually to progress with their learning.

99. The teaching of theory lessons is often dull. Some lessons are badly planned, explanations of technical concepts are sometimes unclear and too little use is made of visual aids or demonstrations to reinforce key points. Teacher-led question and answer techniques are sometimes over-used. Too often, teachers give students

handouts to read but do not check that the students have grasped the topic. In others there is an over-reliance on copying notes from the whiteboard.

100. Teachers are well qualified and most have teaching and assessor qualifications. In one college, teachers used two-week industrial placements effectively to ensure their teaching reflected industrial practice. There are ample numbers of computers available to students and mostly good CAD facilities. Some workshop accommodation is untidy and cluttered. Machinery in workshops is often dated, but usable.

101. Assessments set in lessons are challenging and help teachers check students are learning. However, in one college, students' estimated grades were based on the teacher's knowledge and experience of the students rather than an analysis of their performance against learning plans. The planning of assessments is often poor and students frequently receive a number of assessments at the same time making it difficult for them to meet deadlines. There is little use of individual learning plans and students are not always aware of their progress on the course. Parents receive regular, but often bland, reports of the progress of students.

102. Most colleges visited give students the opportunity to study GCE AS and A-level subjects alongside the AVCE, but few students take it. Instead, students prefer to study vocational subjects such as units of engineering-related NVQs and CAD which help to make the AVCE more vocationally relevant and increase their employment prospects. Colleges in the survey effectively integrated the teaching of key skills within the vocational subjects wherever possible, but key skills were not popular with students. Most students took the AVCE to gain entry to HE rather than for employment, although one college used a business and environment unit assignment based on a real company to demonstrate the relevance of the qualification to employment. Some colleges are switching to the national diploma or GCE A levels. They believe HE institutions prefer students to take the national diploma or have found that they require students to have studied GCE A-level mathematics as well as the AVCE if they wish to study for an engineering degree.

103. Prospective students can usually sample aspects of the course through taster sessions before they enrol. Most students get good personal support from their tutors. The additional learning support needs of most individual students are identified at the start of their course and appropriate support provided. Some students knew little of the range of career opportunities available to them after they completed the AVCE.

Leadership and management

104. In the colleges surveyed, internal verification was well organised. However, there were weaknesses in curriculum management. There was not enough focus on student performance and few courses had set targets for retention and achievement. Few teachers have undertaken formal unit-specific staff development or industrial updating, so that some are not familiar with the units or how to teach them. Standards moderation is problematic. Some of the colleges visited had provided

information to the awarding bodies in the wrong format so that there were delays in awarding students their full award.

Health and social care

Key strengths

- much good teaching and learning
- effective support for students
- good curriculum management.

Areas for improvement

- some aspects of assessment
- development of students' numeracy skills
- opportunities for school teachers to undertake industry updating.

Evidence base

105. AVCE health and social care is available as three different qualifications: the 3-unit AS, 6-unit single award and the 12-unit double award. In the institutions visited there were 177 students on the AS course, 982 on the one-year single award and 5,159 candidates for the double award. Two schools, two sixth form colleges and five general FE colleges were included in the survey. In most of these institutions, recruitment to the double award remains similar to that for the GNVQ advanced. Few boys study the AVCE health and social care.

Achievement and standards

106. In 2002, the pass rate for the double award was 86.5%. This is similar to that for all double award AVCEs but lower than that for GCE A-levels. The pass rate for girls was much higher than that for boys. The pass rate of the 1,709 students who took the AS in 2002 was 83.8%. Again girls performed much better than boys. In 2000/01 retention on the one year single award was low at 67%, much lower than retention rates over two years for the GNVQ advanced. The proportion of students gaining higher grades is low. For example, in 2002 only 9.8% of double-award students gained grades AA, AB or BB. These figures are similar to those for all AVCEs but are much lower than for GCE A levels. Attendance in colleges visited during 2001/02 and 2002/03 was satisfactory. Attainment in lessons observed improved between 2001/02 and 2002/03 but remained lower than that for GCE AS/A levels.

107. Overall retention and pass rates in the institutions surveyed are good. Value added analyses of results show that students perform as well as would be expected on the basis of their prior attainment, or slightly better.

108. Students' written work is mainly of a satisfactory standard with a minority being of a higher standard. A few examples of poor written work were seen. ICT is well used. Students' literacy skills are generally satisfactory but numeracy skills are often weak. Students effectively develop their personal and social skills. Progression to HE and to nursing is good.

Quality of education

109. Data from college inspections show the proportion of lessons featuring good or better teaching is lower for the AVCE than for GCE AS/A levels, and slightly below that for all level 3 lessons. Learning grades followed a similar pattern. The proportion of unsatisfactory teaching declined between 2001/02 and 2002/03.

110. In the institutions surveyed, teaching and learning are good overall. Over two thirds of lessons were graded good or better for both teaching and learning. Most teaching is well planned. Good teaching is characterised by lively interaction and includes activities which motivate students and extend their knowledge and understanding. Good use is made of teachers' own professional experiences, and theory is clearly placed in a vocational context. In one lesson, the teacher used a variety of strategies to promote understanding of legislation relating to equal opportunities. Students engaged in group work, individual work and class discussion. They demonstrated a good understanding of complex legislation and applied it effectively to health and care settings. Good use is made of student observations and experiences. In a lesson on communications, students used their observations of interactions in primary schools in discussion. In a lesson on child development, students used their own observations and information from parents about children's development. There is little use of ICT in lessons. The development of specialist vocabulary relating to health and social care is a feature of better lessons, but is often missed. In unsatisfactory lessons, teacher exposition dominates, there is inadequate checking of understanding, and some students are not engaged.

111. Few school teachers have relevant industrial experience. In colleges, teachers have good relevant vocational experience. Learning materials are generally good and include well-designed handouts. There is appropriate equipment for practical work, such as physiological measurements. Students have access to relevant texts including specific texts for the compulsory units. There is a lack of textbooks for the optional units.

112. The management of assessment is good. The workload is spread over the year and coursework assignments are vocationally relevant and challenging. Students are able to get feedback from teachers before their assignments are submitted for final marking. This increases teacher workload as assignments are marked twice. External moderators' written reports are not always clear. The timing of exams is carefully planned, and typically involves two external exams at the end of each year for the double award. Exams taken throughout the AVCE course are currently set at

A2 standard. This puts AVCE students at a disadvantage when compared with AS students. Many students' exam marks are low compared with their coursework marks. Students value the fact that the majority of the assessment is by coursework.

113. Most students are full time and take the double award over two years, often completing the single award in year 1. None of the schools and colleges surveyed offered the AS over the first year with the option of completing the single award at the end of year 2, a model more similar to GCE AS and A-level courses. AS/A2s are usually available alongside the double award but the numbers of students taking these vary widely. Other vocationally relevant qualifications are often offered, such as First Aid. Work experience is included and typically comprises a short block placement in one environment. Some types of work experience, such as hospital work, remain very difficult to arrange. Most courses make use of speakers and visits to provide vocational relevance. Optional units cover many aspects of health and social care but student numbers and timetabling limit choice. The external requirement for a set number of externally examined units also limits choice.

114. Support for students is good. Teachers provide very good individual support and encouragement to students both in and out of class. Pre-course advice and guidance are good but some students expect the course to be more practical. Some students feel inadequately prepared for the rigorous nature of the assessments. Advice and guidance on progression to HE and careers, such as nursing, are effective and students particularly value support with their HE applications. Tutorial arrangements are good. Many institutions set individual target grades for students to aim for and their progress is reviewed against them. In colleges, initial assessment is carried out and additional support is provided where a need is identified. This is not always effective in developing numeracy skills. In schools there are no formal arrangements for initial assessment or additional support.

Leadership and management

115. Leadership and management are good. Courses are well organised with good documentation. Managers responded rapidly to minimise the impact of problems with the AVCE on students. Some colleges are considering replacing the AVCE double award with national diplomas. Colleges set targets at course level and carry out self-assessment. Schools do not set targets but, in the schools surveyed, managers scrutinise results very carefully and seek to improve them. Deployment of resources and value for money are satisfactory overall.

Information and communication technology

Key strengths

- good recruitment to AVCE awards
- good pass rates for many awards
- much good teaching
- good individual support for practical work
- good standard of portfolios.

Areas for improvement

- poor pass rates for AS VCE
- unacceptably wide range of pass rates between institutions for the same qualification
- insufficient reference to industry practices or opportunities to gain vocational experience
- poor support of the 3-unit AS VCE to computing employment or progression to HE.

Evidence base

116. ICT is available as an AS VCE award of 3 or 6 units and an AVCE award of 6 or 12 units. Schools usually offer AS VCE awards. In colleges, the most common options available are the AVCE awards. A choice of units in some schools and colleges provides opportunities to specialise in graphics or programming themes. Colleges also offer the Business and Technology Education Council (BTEC) national diploma in IT. Enrichment for AVCE double award students is usually provided through programming languages, networking or web design evening classes. ICT students who do not extend their mathematical skills beyond level 2 have a reduced range of HE progression opportunities. The study of key skills in colleges is frequently restricted to level 2 and is not covered in some schools. All the schools and colleges found that recruitment to the VCE awards was good. Enrolments to the AVCE double award were 7,000 in 2000 compared with the GNVQ advanced award which recruited around 5,000 in 1999. Recruitment to the national diploma award has been maintained at about 3,500 nationally. Inspectors visited three secondary schools and six FE colleges in the course of the survey.

Achievement and standards

117. Overall, pass rates for students aged 16 to 18 for VCE ICT awards are satisfactory. The AVCE double award had a national pass rate of 82.7%, the AVCE single award 81.7% and the AS VCE 69.4% in 2002. The equivalent pass rates for GCE A and AS levels in computing and IT were 88.8% and 75% respectively. The GNVQ advanced IT, the AVCE double award and national diploma in IT all had similar pass rates. The pass rate for the AS VCE was poor at 69.4%. There is a wide range of pass rates between institutions. In colleges, pass rates for the single AVCE award ranged from 61% to 91% and in schools the AS VCE 3-unit award varied from 73% to 93%. Retention rates for VCE awards in schools and colleges were roughly the same. The AS VCE 3-unit award is a general ICT qualification and does not support progression to computing employment or HE.

118. Students are confident in their technical skills and applications software is used well. For example, effective use was made of look-up tables and linked spreadsheets in a lesson on human/computer interfaces. The quality of a few students' analysis and problem solving is below the standard expected of students studying at level 3. This creates difficulties for students who are not introduced to formal systems analysis. In some lessons, students' knowledge of commonly found programming constructs is below that expected. Students with sound mathematical and English skills on entry to the AVCE awards tend to achieve better overall results. Standards of students' work are in line with award requirements. The portfolios of a significant minority of second year AVCE students were of consistently high quality with detailed and comprehensive coverage of assignments that demonstrated commitment and understanding.

Quality of education

119. Much teaching is good and only 6% was found to be unsatisfactory. There are good links made between theory and practical work in many lessons and individual support for students in practical lessons is good. Students are generally well briefed about the tasks and assignments, including the marking criteria. Assignments are set at an appropriate standard and are frequently structured to assist students to manage their time and workload more effectively. There is a good balance of theory and practical work in most assignments but the quality of students' project documentation does not always match industry practices. Illustrations of industrial applications and current practice are not always used well in lessons.

120. Students studying the double award develop effective skills of design, analysis and evaluation when tasks are based on real applications. Programming assignments and the systems analysis unit develop students' ability to solve complex problems in a logical way. However, students often have programming techniques demonstrated to them without having to work them out for themselves. The pace of practical project work is sometimes too slow. In the best practice, students are required to set their own targets for each lesson. The targets are then checked by the teacher to identify any difficulties and help meet completion deadlines.

121. Too few students complete a period of work experience as part of their courses. Visiting speakers are not often used to bring up-to-date information of industry practices to the classroom. In addition, some teachers place too little emphasis on the key skills of group working, presentation and time management. Not all institutions offering AVCEs in ICT reflect industry practice in the use of the technology for communication between teachers and students or using software to aid student tracking.

122. Specialist resources are satisfactory. Students have good access to equipment during formal lessons and most have some access at other times although this is more restricted in schools. There is often a lack of good quality colour printers for graphics and media work. Industry-standard networking facilities are used well in many colleges. Teachers are suitably academically qualified but there is a lack of recent industry experience, particularly in schools.

123. Assessment is generally accurate. Written feedback is mainly good and provides information that allows students to improve. Internal verification does not always comment on the quality of feedback or issues of poor spelling and grammar. Tracking of students' progress varies in level of detail. In the best examples, progress is monitored electronically against assessment criteria and shared across the course team. There is insufficient emphasis placed on the assessment of practical skills developed by students. The consistently high-quality assignment work over several units is not always recognised in assessing an overall VCE grade.

Leadership and management

124. Curriculum management of the AVCE in ICT is generally strong. Teachers are prepared to review course organisation and student support and make changes where necessary. College self-assessment reports provide a robust evaluation upon which plans for improvement are based. Senior managers in schools provide clear direction to develop vocational courses to make sixth forms more inclusive. There is also a strong commitment in colleges to meet a broad range of vocational needs. Several colleges are reviewing whether the content and assessment methodology of the national diploma is more appropriate than AVCEs in meeting the needs of students and if it can more closely mirror local employers' needs. Some colleges intended to continue to offer both.

Science

Key strengths

- high pass and retention rates
- good value added results for AVCE science students
- high rates of student progression to HE and other courses
- effective practical laboratory teaching
- good support for students
- well-equipped science laboratories
- effectively planned and managed courses.

Areas for improvement

- low proportion of students gain high-grade passes in AVCE science
- insufficient use of ICT to promote learning
- low student recruitment
- insufficient professional updating for science teachers
- underdeveloped links with industry and insufficient work experience.

Evidence base

125. Recruitment to vocational science courses is low compared with the high number of students taking GCE AS and A levels. In 2001/02, over 55,000 students took GCE AS biological sciences and around 47,000 took the GCE A levels. Only 1,137 students took AVCE science double award in the same year. Most institutions have small numbers of AVCE science students. In 2001/02, the number of students who took AVCE science courses was similar to the number who took GNVQ advanced science in the previous year. Inspectors visited seven colleges, three sixth form colleges and four general FE colleges.

Achievement and standards

126. Pass rates for AVCE science are good. For example, the double award had a pass rate of 88% in 2001/02. However, the number of high-grade passes was low. In contrast, the proportion of students obtaining high grades in the GNVQ advanced science course in 2000/01 was high. Students consistently achieve better results for the AVCE science course than would have been predicted from their prior attainment at GCSE. Retention rates are consistently high and one college visited in the survey had 100% retention rates for the last three years for the AVCE course.

127. AVCE science students develop good research skills and are able to carry out extended study. Their coursework is well researched and presented. Students' attendance is generally high and was 84% in the lessons observed.

Quality of education

128. Teaching and learning are good and lessons are well planned. Teachers prepare high-quality assignment briefs in realistic vocational contexts and make effective use of learning resources. In one college, where English is a second language for many students, teachers carefully explained the scientific terminology. This helped the students to understand and sped up their progress. The teaching of practical laboratory skills is well planned and risk assessments are effectively carried out. Key skills are effectively taught by science teachers; they ensure the content is relevant to the topic being covered and is linked to the students' coursework. In one college, students can access a website with high-quality learning materials at the college and from home.

129. However, sometimes students work in groups too large for practical work and individuals are not sufficiently occupied. ICT is not always used effectively in lessons. For example, in one lesson, students completed long test questions using computers which would have been more easily carried out using pen and paper.

130. Teachers are well qualified and the majority have relevant degrees and teaching qualifications. Staff development activities in many colleges have effectively prepared them for the new specifications. However, there are few staff development programmes to ensure teachers have relevant industrial experience.

131. Resources for teaching and learning are good. Many institutions have attractive science laboratories that are well equipped and suitable for teaching theory. Students' access to ICT equipment varies considerably and some institutions have few computers in laboratories. In addition, the slow speed of networks or PCs inhibits effective use in lessons. In contrast, the ample ICT resources and laptops in one college were effectively used in laboratories through radio links to the college network.

132. Where teachers have agreed a common assessment policy, the internal verification procedures ensure consistency of marking standards. Where this is not the case, some students are unsure about the assessment grading criteria. One sixth form college has no formal assessment procedures and cross-marking

procedures to moderate coursework were not carried out for all AVCE units. The assessment of students' work is carried out regularly. Marking is fair and work is returned promptly. Comprehensive feedback is given to students on marked work, although in some work incorrect spellings are not corrected. Students are usually tested on entry for their level of literacy and numeracy and sometimes to assess their individual learning styles. The quality of target-setting for students varies considerably. In some institutions, the progress of students is monitored against individual targets, and is reported to parents twice each year. Other AVCE science students do not have target grades and some do not have individual learning plans.

133. Most institutions apply the entry criteria to AVCE science flexibly. Students may be enrolled with low grades on entry, but have their potential carefully assessed. Some colleges offer both the 6-unit and 12-unit AVCE; other colleges and schools offer only one. Timetable clashes make it impossible for students in some colleges to take additional courses alongside their AVCE. For example, in one college, GCE AS mathematics was the only subject available as a complementary course to AVCE students. Other colleges provide a broad range of options such as GNVQ intermediate, GCSE subjects and GCE AS and A levels.

134. Teachers try to make AVCE science courses vocationally relevant, but links with industry are underdeveloped. Work experience is not a structured part of many AVCE science courses. One sixth form college has developed effective coursework assignments that are relevant to local industries. Other institutions provide assignments that involve students in considering the wider curriculum. AVCE science provides an effective way of widening participation, and a pathway to HE and employment for students that could not join a GCE A-level course due to their low entry qualifications. One college has been successful in providing a vocational science route from level 1 through to level 3. This has resulted in students progressing from foundation level through to HE.

135. Students receive regular tutorials in most institutions and feel well supported. Where individual targets have been set, tutors monitor students' progress against these targets regularly. In one institution, although regular individual interviews take place every three weeks, these were too informal and no written records are kept to inform action planning. Helpful careers education and guidance is provided through assignments. Teachers effectively monitor students' attendance and punctuality. The support provided to AVCE science students whose first language is not English varies. In some institutions, language support is effectively provided for students as and when required. In others, less time is devoted to language development than to key skills of ICT and application of number.

Leadership and management

136. Leadership and management of AVCE science courses are good. Managers have a strong commitment at all levels to developing the vocational science curriculum. Teachers have a clear view of the purpose of the AVCE science course. Challenging targets for retention and pass rates are set and self-assessment processes are effective in bringing about improvement. New teachers are well supported. Course reviews are thorough and teams hold regular meetings that focus

on the progress of students. Students' views are used effectively to inform course planning. Sometimes, action plans arising from course reviews are not formally monitored and lesson observations do not always take place. There are not enough opportunities to share good practice, particularly for teachers who may have no prior experience teaching vocational science. Since the number of students on AVCE science courses is small, it is sometimes difficult to make the provision cost-effective.

Travel and tourism

Key strengths

- key ideas are understood by most students
- most courses are taught effectively
- students demonstrate good independent study skills
- good progression rates onto related HE courses and employment.

Areas for improvement

- opportunities for work experience
- accuracy of marking
- better support for teachers new to teaching the AVCE
- course organisation in some schools.

Evidence base

137. There has been an increase in the combined number of students studying leisure and recreation and travel and tourism following the introduction of two separate AVCEs to replace the GNVQ advanced in leisure and tourism. In the last year of the old course there were some 7,016 students entered for the examination. In 2001/02 there were some 3,331 candidates taking travel and tourism and 1,787 taking leisure and recreation for the single award. The numbers sitting for the double award were 5,040 in travel and tourism and 2,684 in leisure and recreation. The 3-unit AS award was not offered as an option. Seven travel and tourism courses were inspected, four at general FE colleges, one at a sixth form college and two at 11–19 schools. Recruitment was buoyant in the schools and the sixth form college but more uneven in the general FE colleges. Each of the general FE colleges was reviewing whether or not to offer the AVCE in travel and tourism or replace it with a BTEC national diploma course.

Achievement and standards

138. Most students who complete their course achieve well, especially given their starting points. Once students come to terms with the course structure, most show they can work diligently and successfully. On the courses inspected, retention rates were high and in one school and one college all students have completed the course successfully in each of the past three years. In 2002, the pass rate for the double award in travel and tourism was 84% with girls doing better than boys. The pass rate for the single award was 87%. Nationally retention rates average 77%.

139. Attainment was satisfactory or better in 86% of lessons, but good, very good or excellent in only 14% of lessons. In a similar proportion of lessons attainment was unsatisfactory. This contrasts with the national picture where in 2002/03 attainment was judged satisfactory or better in 91% of lessons and the proportion of good or better work was 58%. Most students show good research skills and an ability to work independently when required and effectively as team members on other occasions. Their ability to make well-researched presentations to a suit a variety of audiences improves markedly over the duration of the course and many can do this impressively. What students find most difficulty with at all stages of the course is in thinking critically and in applying their knowledge and understanding to less familiar contexts. Students' attendance, at 85%, was close to national averages. On some courses, punctuality was an issue and the impact of some of the teaching was much reduced by the lack of a prompt start to lessons.

140. Opportunities for students to progress to HE were good. Most students who were applying were offered realistic point scores for degree courses in tourism-based courses in particular. Few HE institutions took account of achievement in key skills.

Quality of education

141. While most courses are well organised, the extent to which they engage and enthuse students differ. Teaching was good or better in 50% of lessons, satisfactory in 36% and unsatisfactory in 14%. These proportions are somewhat lower than the national average where two thirds was judged to be good or better. There was a very great difference between best and worst teaching. The amount of progress students made in lessons reflected the quality of teaching; some students made outstanding progress in the best lessons, and little or none in the worst. Typically, most students made satisfactory progress.

142. Where the teaching is most effective, lessons are well planned and care is taken to ensure that students' interest is maintained through a variety of appropriate activities. At one school, a lesson aiming to develop understanding of how best to handle customer complaints had clear objectives, logical structure, good pace, and an effective question and answer session to check understanding. It ended with a good summary. The class remained focused and worked well in groups. All the students achieved an understanding of how to reply to a letter of complaint by the end of the lesson. The resource material used was relevant to the vocational area but the teacher did not have any personal commercial experience to draw on.

143. Most teachers are appropriately qualified, though many travel and tourism teachers in schools do not have as wide a vocational experience as their college counterparts and they are not so well placed to teach related NVQs. They compensate in other areas, for example, by understanding more clearly than many the comparability of standards between AS levels and AVCEs as many teach both courses. In colleges there were good resources which were well used. In schools, the picture was much more variable and access to a computer workstation was a serious issue for some students which limited what they could achieve and when they could achieve it.

144. Teachers spend too large a proportion of their time assessing students' work and progress in relation to teaching and planning the course. Most do so diligently and well. Despite these efforts, differences in the judgements at grade boundaries occur between provider and examination board assessments. Where teachers have agreed a common assessment policy and there are strong internal verification procedures to ensure consistency of marking standards, judgements are secure. However, about a quarter of the portfolios scrutinised had been graded too generously. Many teachers spoken with are uncomfortable about the consistency with which work that is sent to the examination boards for external moderation is graded.

145. In general, the support for students onto and during the course is good but is more variable at the end of the course depending on whether the student is looking for HE or employment. Support for those wanting to progress onto HE is usually excellent but the quality of careers advice for students wanting to move into employment is mixed. Most students are studying at the right level and coping with the demands being made of them. In most schools and colleges, the personal or form tutor also teaches the students. This is generally helpful.

Leadership and management

146. The leadership and management of travel and tourism courses are at least satisfactory. Most teachers have a clear view of the purpose of the travel and tourism course and see it as a way of providing a pathway to HE and employment to students that would have difficulty succeeding with an A-level course. There are sometimes not enough opportunities for the sharing of good practice, particularly to support new teachers who have no experience of the teaching on a vocational course. Too few schools and colleges measure the cost-effectiveness of the course carefully enough. Most of the courses inspected provided satisfactory value for money and a few provide good value for money.

147. Course organisation was unsatisfactory in both of the schools visited. Students worked in one large group with students studying for different AVCE and GNVQ qualifications together. This meant that in some lessons the focus was on generic AVCE issues rather than specific travel and tourism questions. Partly as a consequence of these class groupings, teachers placed an undue reliance on worksheets which failed to address all students' learning needs appropriately.

Annex 1. Background to the AVCE

148. The GNVQ was introduced in 1992 as a general vocational qualification that could be easily taught in schools and colleges to provide progression opportunities to employment and HE. It was a qualification primarily for full-time students aged 16 to 18 to help promote the vocational pathway alternative to GCE A levels and to make comparable, but distinctly different, demands on students. Some colleges also offered the qualification to part-time students and adults. GNVQ part one was also offered to school pupils aged 14 to 16. The GNVQ was a unit-based qualification comprising a combination of mandatory and optional vocational units with mandatory core skills units covering communication, the application of number and IT. In addition, all courses were intended to develop the student's personal and study skills. The GNVQ used much of the NVQ assessment practice, for example, it was competence-based, evidence-based and had a strong focus on portfolio building. Students took internal assessments for most units and externally-set tests for most mandatory units. The full GNVQ was awarded the grade of pass, merit or distinction. Colleges and schools were expected to design their own courses to meet the requirements of the awarding body with which their students were registered. For many schools, the GNVQ gave them the first opportunity to offer alternative qualifications to GCE A levels for students who wished to study in their sixth forms. With its foundation, intermediate and advanced levels, the GNVQ catered for students with a wide range of abilities. Many students in both schools and colleges used the GNVQ successfully to progress to HE.

149. Throughout the time of the GNVQ, however, there were concerns about its structure, its low esteem and its heavy emphasis on assessment. Partly because of the inclusion of core skills, later known as key skills, completion rates were often low. The Capey Report (1995) recommended more unit-based assessment and that external assessment should contribute to grading. The Dearing Report (1996) recommended a change in title to applied A level, and that 3-unit, 6-unit and 12-unit applied A-level awards should replace the overall GNVQ advanced to improve completion rates, especially for those students who wished to combine GCE A-level study with vocational study. He also recommended that the key skills award be separate from the GNVQ award itself and that there should be externally-assessed examinations and set assignments. In 1998, the government agreed that the new grading should reflect the GCE A-level scale of A–E, that the 3-unit GNVQ could be developed in some areas and that there should be external examinations together with portfolios of evidence, but not the title of applied A level.

150. The 'Qualifying for Success' reforms, including the introduction of the AVCE, which was introduced in September 2000, were intended to encourage young people to study more subjects over two years, while also helping them to combine academic and vocational study. It was also intended that students should develop their competence in key skills including communication, application of number and IT. AVCEs combine many of the features suggested by Capey and Dearing. Students are required to develop the skills, knowledge and understanding that are specific to a range of occupations or professions. In September 2002, eight new GCSEs were introduced in schools and colleges as part of the government's programme to

develop further the vocational provision for students in the 14 to 19 phase. The examinations replace the GNVQ part one, and are worth two conventional GCSEs.

151. The AVCE is currently available in 14 vocational areas in its 6-unit and 12-unit forms (Annex 2). The most popular subjects are business, ICT, health and social care, leisure and recreation, and travel and tourism. The 3-unit AVCE is offered in four vocational areas; business, engineering, health and social care and ICT (Annex 2).

152. The 12-unit AVCE, or double award, is intended to be of a standard equivalent of two GCE A levels and comprises a minimum of six and a maximum of eight compulsory units, with a maximum of six optional units. It is usually taken over two years. The 6-unit AVCE, or single award, consists of at least three compulsory units and a maximum of three optional units and is of a standard equivalent to one GCE A level. It is usually taken over one year. The 3-unit AVCE, or Advanced Subsidiary Vocational Certificate of Education (AS VCE), consists of three compulsory units and is usually taken by students alongside other qualifications, over one year.

153. Each unit of the AVCE is assessed either through a portfolio of evidence or by an external assessment. One third of the compulsory and optional units are normally externally assessed, but in ICT, media, art and design and performing arts, 25% of units are externally assessed. Students are, therefore, awarded both an overall qualification grade and individual unit grades. The overall grade for the award is on the same scale as that used for GCE A levels. However, all assessments are currently at GCE A level and not GCE AS standards. It is intended to introduce assessment at the equivalent AS level in September 2004. Opportunities to assess the key skills are indicated in the AVCE specifications but, unlike the GNVQ, they are accredited separately and not required for the award.

Annex 2. AVCE subjects

The AVCE – 6-unit and 12-unit awards

Art and design

Business

Construction

Engineering

Health and social care

Hospitality and catering

ICT

Leisure and recreation

Manufacturing

Media

Performing arts

Retail and distribution

Science

Travel and tourism

The AS VCE – 3-unit award

Business

Engineering

Health and social care

ICT

Annex 3. Colleges and schools visited as part of the survey

Colleges

Accrington & Rossendale College

Aquinas College

Basingstoke College of Technology

Blackburn College

Brockenhurst College

Brooklands College

Burnley College

Chelmsford College

City College, Coventry

City of Stoke on Trent Sixth Form College

City of Sunderland College

College of North West London

Doncaster College

Dudley College

East Riding College

Greenwich Community College

Hackney Community College

Hertford Regional College

Hopwood Hall College

Hugh Baird College

Hull College

Lewisham College

Leyton Sixth Form College

Liverpool Community College

Manchester College of Arts and Technology

Mid Cheshire College

New College, Pontefract

North Devon College

North Warwickshire and Hinkley College

Oldham College

Park College

Park Lane College

Peterborough Regional College

Redcar and Cleveland College

Royal Forest of Dean College

Runshaw College

South Downs College

South Trafford College

Southgate College

St Mary’s College, Blackburn

St Vincent’s College

Stockport College of Further and Higher Education

Sutton Coldfield College

Tamworth & Lichfield College

Wakefield College

Schools

Calder High School, Hebden Bridge

Mayfield School and sixth Form Centre, Dagenham

Mellow Lane School, Hayes

St Augustine’s Catholic School, Redditch

St Peter’s Catholic Comprehensive School, Guildford

St Peter’s Catholic High School and Sixth Form Centre, Gloucester

The Deanery School, Wigan

Tong School, Bradford

Wembley High School, Wembley