Department *of* Education

SUMMARY REPORT

ON

VOCATIONAL COURSES AT LEVEL 3
IN SEVEN COLLEGES OF FURTHER EDUCATION

INSPECTED: 1998/99 AND 1999/2000

Providing Inspection Services for

Department of Education
Department of Higher and Further Education, Training and Employment
Department of Culture, Arts and Leisure

CONTENTS

PART 1

1.1   INTRODUCTION

1.1.1   During the 1998/1999 and 1999/2000 academic years, the Education and Training Inspectorate undertook a survey of level 3 work in seven colleges of further and higher education (see Appendix). The main purposes of the survey were to evaluate the range and quality of provision, and the standards and outcomes achieved by the students. The survey was undertaken at a time of considerable change in the further education sector in Northern Ireland and in provision for young people and adults in response to Government initiatives in, for example, Lifelong Learning and vocational education and training. Inspection reports on the level 3 provision in each of the seven colleges included in the survey have already been published.

1.1.2   In each of the seven colleges, visits were made to a representative sample of full-time and part-time courses. Almost 600 teaching sessions were observed, and many discussions held with students, lecturers, heads of department and senior managers. These colleges together represent some 45% of the full-time provision and 51% of the part-time provision across the sector.

1.1.3   This summary report includes the main general findings to emerge from the survey as well as specialist summary reports on almost all of the curriculum areas included in the survey. The curriculum areas of administration and office skills, business and management, health and social care, and information technology (IT) were inspected in all seven colleges, construction and the built environment and mechanical engineering in six colleges, art and design in three colleges, hospitality and catering in two colleges and motor vehicle in two colleges. Because of the small number of colleges inspected, specialist reports in hospitality and catering and motor vehicle are not provided in this report. Annex 1 has tables of enrolments for the period 1995/96 to 1999/2000.

1.2 MAIN FINDINGS

1.2.1 The further education sector in Northern Ireland makes a wide range of full-time and part-time provision at level 3 which generally caters well for the requirements of students, but less so for industry. The full-time provision consists largely of advanced General National Vocational Qualification (GNVQ) and EDEXcel BTEC national diploma programmes across a wide range of curriculum areas. Over the last five years, there has been a trend towards advanced GNVQ programmes although this has not been matched by a significant and corresponding reduction in national diploma programmes. The part-time provision consists largely of BTEC national certificate programmes and National Vocational Qualification (NVQ) level 3 programmes which, for the most part, are provided in response to Jobskills, Modern Apprenticeship and other vocational training programmes. There is some part-time provision accredited by professional bodies. Over the last five years, there has been a significant increase in the number of NVQ level 3 programmes and a decrease in the number of part-time programmes.

1.2.2 There has been an increase in the further education sector of around 50% in the number of students on level 3 programmes over the last five years; from 17,626 in 1995/96 to 26,306 in 1999/2000. The increase in full-time students is less marked than the increase in part-time students over the same period. The full-time enrolments increased by around 20%, from 9,716 to 11,722, and the part-time enrolments increased by around 84%, from 7,910 to 14,584. Currently, the full-time level 3 provision represents almost 50% of the full-time provision in the further education sector and the part-time provision represents around 22% of the part-time provision. Not all of the seven colleges included in the survey increased their enrolments in level 3 programmes during this period. Four colleges increased their full-time and part-time enrolments, two colleges increased either their full-time or part-time enrolments and one college did not increase either their full-time or part-time enrolments.

1.2.3 The curriculum areas attracting the largest number of full-time students are business and management, and health and social care. These areas together represent around 54% of the level 3 provision inspected. In contrast, mechanical engineering and IT together represent only 20% of the provision

inspected. This imbalance in the full-time provision is not addressing adequately the skills needs of the Northern Ireland economy.

1.2.4 Students on full-time courses have a good range of learning experiences in a significant majority of courses. On entry, students undertake induction programmes which introduce them to the college and to their individual vocational programmes, and help them to make the transition from school to further education college, to find out more about the vocational area, and to develop an understanding of the programme they have chosen including the arrangements for assessment and support. Activities undertaken during induction also enable students to get to know one another and to develop collegial relationships. For most students, there are opportunities for them to have work experience related to their chosen vocational area. Often, the period of the work-placement or the poor planning and supervision of the work experience does not provide the student with the quality of learning and training which they ought to have. Generally, there needs to be greater consistency in planning for work experience, with employers more directly involved, to ensure that the students benefit fully from the experience. Most colleges provide opportunities for students to visit industrial centres and, in some instances, these are extended to centres outside Northern Ireland and involve students in planning a residential visit over several days.

1.2.5 Students on part-time courses have a wide range of learning experiences which enable them to develop a good understanding of the content of their courses and to develop relevant skills effectively. For students who are returning to study after many years from school, there are good arrangements for individual study support. In contrast, for students on NVQ level 3 programmes, there is insufficient attention paid to the match between their directed training in college and training in the workplace, and to the planning of assessment in the workplace.

1.2.6 The quality of provision for the key skills of application of number, communication and IT is generally poor in most colleges. The full-time students on GNVQ programmes have opportunities to develop their key skills usually through discrete classes. In the best practice in this programme, the key skills have been mapped against the vocational units and assessment opportunities are identified clearly in the assignment tasks; the key skills tutors

have a good understanding of the vocational area. In contrast, in most colleges, the co-ordination of key skills is poor, the provision is uneven, and the internal verification procedures are weak. As a result, the students are not developing their key skills at a pace and to a standard commensurate with their abilities. The provision of key skills for part-time students on NVQ level 3 programmes is particularly poor. With few exceptions, full-time students have opportunities to strengthen their General Certificate of Secondary Education (GCSE) grades in English and mathematics through additional classes. There is a need to assess the students' standards in key skills during the initial stages of their programmes and ensure that planning and teaching take sufficient account of individual needs and abilities.

1.2.7   In the full-time and part-time courses with low enrolments, and in some full-time courses with strong enrolments, the range of options does not cater adequately for the specialist interests of students or meets the needs of local industry.

1.2.8   Relationships between the staff and students are good and teaching sessions are generally relaxed and often good-humoured.

1.2.9   The quality of teaching and learning is generally good and often excellent. Around 25% of the lessons observed were excellent, in 54% strengths outweighed weaknesses, and in 20% weaknesses outweighed strengths. Around 1% of the lessons were unsatisfactory. In the best practice, lecturers combine a variety of teaching methods such as direct exposition, group work and practical work. They question and set tasks which provide opportunities for students to relate theory to the vocational context, and which enable them to develop their skills and understanding. They also provide helpful and supportive comments to enable students to improve and make progress in their respective programmes. In contrast, in a minority of lessons, the planning is poor, the work is poorly organised and the students are not challenged by the tasks set; there is often excessive copying of notes from books or overhead projector.

1.2.10   In general, insufficient use is made of information and communications technology (ICT) in teaching and learning across the majority of curriculum areas. Whilst there has been a minimal increase in the use of the Internet and CD-ROM for information retrieval by students and staff, the use of

ICT in the classroom is significantly underdeveloped. There is an urgent need for staff to develop the skills and understanding to exploit fully the potential for teaching and learning which ICT provides.

1.2.11   The standards of work of most students in their vocational areas are satisfactory or better. Students develop appropriate theoretical knowledge and demonstrate competently good levels of vocational skills commensurate with their abilities and level of course. They have a good awareness of contemporary issues related to their vocational area. In some full-time programmes, however, the students' practical skills are underdeveloped due to a reduction in curricular time or the removal of key practical projects. The significant majority of students in administration and office skills, business and management, construction, built environment and civil engineering, ICT, and mechanical engineering have developed good levels of IT skills and can use these appropriately in their vocational areas. In art and design, health and social care, and in most craft courses, the IT skills of the students are generally not well developed. Most full-time students have good standards of literacy and numeracy skills commensurate with their programmes although there is considerable variation both within and across the seven curriculum areas. The standards of literacy and numeracy of a minority of part-time students are poor.

1.2.12   The retention rates of students on full-time courses range from 54% to 100%. However, for the vast majority of full-time courses, for example, GNVQ and national diploma programmes, overall retention ranges from 65% to 75%. The high level of students who fail to complete these programmes, around one in four who are recruited, is unsatisfactory and colleges need to address this major weakness in full-time provision as a matter of urgency. At individual programme level, there is no single factor which correlates strongly with poor retention. However, good retention is evident in courses where the entry qualifications of students are high, induction and initial assessment are well-planned, and the student support and tutorial arrangements focus on the needs of individual students.

1.2.13   The success rates of full-time students who complete their programmes are, with very few exceptions, good or excellent; they range from 80% to 100%. Around three-quarters of the full-time students who complete

GNVQ and national diploma programmes progress to higher education and most of the remainder to employment.

1.2.14   The retention rates of students on part-time programmes range from 50% to 100%. For the majority of these programmes, retention ranges between 60% and 80%, from modest to satisfactory.   It is significant that, with one exception, retention on NVQ level 3 programmes is consistently good at over 80%. Retention on national certificate programmes is more variable, from 50% to 95%, with the majority of these programmes in the 60% to 75% range. Progression for part-time students is good. Students in employment who are successful in NVQ level 3 and national certificate programmes have strengthened their positions with their employers, and many progress to higher level education and training programmes. There is also evidence that part-time students who are successful in gaining level 3 awards and who are not in employment have enhanced their employability considerably.

1.2.15   The provision of student support is satisfactory or good in all colleges.   During induction, students are informed of the range of student services available including the personal tutorial system and counselling. Full-time students are introduced to the system of Individual Student Learning Agreements (ISLAs), complete the initial documentation, and are informed of the planned individual, progress review meetings.   In the best practice, the frequency and quality of the progress reviews inform the students of their progress and the action required to effect improvement. Students are aware of the support services available and have a clear understanding of how to access these, when necessary. They also value greatly the high levels of support which they receive from the majority of lecturers. As part of quality assurance, most colleges, through the completion of questionnaires, survey the students regularly on their experiences.

1.2.16   Learning support arrangements are in place in all colleges for all students. Once identified as requiring additional support, an individual student is allocated to a specialist tutor for individual support or attends a class with a small number of other students with similar needs. Colleges cater well for the few students who have physical disabilities and require access and specialist equipment to enable them to participate fully in their courses. Colleges also

have good access to educational psychology services and social service agencies for students in need of more specialised support.

1.2.17   Colleges have acted on the guidance set out in the Department of Education's Circular 1999/10, "Pastoral Care in Schools: Child Protection". Staff with designated responsibility for child protection have been identified and all staff have undertaken staff development to raise awareness of the policy on child protection.

1.2.18   The majority of students have few opportunities to participate in college-organised social and recreational activities either within their programmes or as extra-curricular activities. They have few opportunities to meet with and compete in sports against students from other colleges. Despite the excellent facilities that exist either in college or at the local leisure centre, few students participate in vigorous physical activity regularly to derive health benefits.

1.2.19   Only two of the seven colleges provide crèche facilities for students.

1.2.20   Most colleges have quality assurance procedures in place which require course teams to review and evaluate their provision.   The implementation of these procedures helps course teams to identify strengths and weaknesses, and to plan for improvement. In four of the colleges, reviews are undertaken annually, reported to senior management and used to inform departmental and college strategic planning, and staff development. These procedures work best when course teams are set clear targets for retention and success, and senior managers review achievement against these targets. However, in the other colleges, insufficient use is made of quantitative data on retention, success and progression rates to inform course, departmental and college planning. Leadership and co-ordination of individual programmes are good in most colleges and are characterised by enthusiastic staff who are committed to the welfare and progress of their students. Teams meet frequently to monitor the progress of students and review the assessment arrangements. However, the increasing use of part-time lecturers does not facilitate co-ordination as these staff are often unable to attend team meetings. This places an unreasonable burden on the co-ordinator and the other full-time lecturers on the team.   For the most part, internal verification is undertaken rigorously

although there is scope to improve consistency in commenting on and grading students' assignments.

1.2.21   Colleges generally have made a good start to the self evaluation of individual programmes within their overall quality assurance procedures. Over the two years of this survey, there has been a marked improvement in the rigour and accuracy of self evaluation reports. For example, in the last college inspected, the overall gradings in the self evaluation reports were assessed as accurate by the Inspectorate in around two-thirds of the individual programmes. Weaknesses in the self evaluation processes remain, however, particularly in reviewing critically the quality of teaching and learning against students' achievements. Generally, the action plans to emerge from self evaluation reports are not focused sufficiently on effecting improvements in students' standards of work and achievements within a suitable time scale. There is a need, therefore, for senior management in colleges to support individual programme teams by discussing their action plans with them and agreeing realistic targets for teams to achieve.

1.2.22   With few exceptions, the lecturers are suitably qualified and experienced for the units they teach, and are deployed appropriately.   A significant majority have kept themselves abreast of modern developments in their vocational areas either through internal staff development programmes, external specialist programmes funded by colleges, participation in the Lecturer into Industry initiative, or through personally-funded staff development. There is evidence that these staff development activities are benefiting directly the students' learning experiences in most programmes. However, further staff development will be required in all colleges to ensure that ICT becomes a key means of enabling lecturers to teach more effectively and thus improve the students' learning and achievements. The industrial experience of the majority of staff working on vocational programmes needs to be upgraded to ensure that they fully understand current practices and processes in their vocational areas.

1.2.23   There are considerable variations in the quality of teaching accommodation across colleges and within most of the individual colleges. Several curriculum areas such as administration and IT are well-served by the provision of high quality accommodation and physical resources in most colleges. In contrast, mechanical engineering has poor accommodation and is

inadequately equipped to ensure that students have the range of learning experiences which they require. In health and social care in most colleges, there is little provision of ICT equipment and relevant specialist software.

1.2.24   Students generally have good access to learning resource centres. Most libraries have adequate stocks of book and journal resources, and are improving the number and range of CD-ROMs in response to staff and students' needs. Access to computing resources, including the Internet, for students outside of their timetables is poor in two of the colleges, but good or better in the remainder.

1.2.25   The social facilities for the students are generally poor. The catering facilities are often inadequate, and are not available for part-time students attending in the evenings.

PART 2

2.1 CURRICULUM AREA: ADMINISTRATION AND OFFICE SKILLS

2.1.1 Main Findings

- The majority of the colleges provide a satisfactory or better range of full-time and part-time level 3 courses in administration and office skills.

- Recruitment over the three years prior to the inspections has remained generally consistent although there are significant variations within the individual programmes.

- The quality of learning is good or better in two-thirds of the lessons inspected. In the London Chamber of Commerce Private Secretary's Diploma (PSD) and the Oxford and Cambridge RSA (OCR) Diploma in Administrative and Secretarial Procedures (DASP) programmes, insufficient emphasis is given to developing the skills necessary for the external examinations.

- The quality of the work-placements on the full-time NVQ level 3 in administration programmes is generally poor. The students have limited opportunities to develop the appropriate administrative, office and supervisory skills in the workplace.

- The standards of work of the students on approximately three-quarters of the programmes inspected are satisfactory or better.

- In the majority of colleges, the course review and evaluation procedures are generally ineffective; they are not sufficiently rigorous in the analysis of the key performance indicators of student retention and success.

2.1.2   The majority of the colleges provide a satisfactory or better range of full-time and part-time level 3 courses in administration and office skills. In two colleges, the PSD and the DASP courses are offered to full-time students in preference to the NVQ level 3 in administration; these courses do not address sufficiently the requirements of the modern administrator. In addition to their main programme of study, students in a majority of colleges take a broad range of additional units, including OCR single subject examinations up to stage 3. With the exception of two colleges, the key skills are not developed, assessed or accredited across the main programmes of study.

2.1.3   Overall, the numbers of students following courses in administration and office skills over the three years prior to the inspections have remained generally consistent. There are, however, significant variations within the individual programmes. There has been, for example, an overall increase of around 33% in student numbers on the programmes leading to the NVQ level 3 in administration. In contrast, there has been a steady decline of around 25% in the number of students enrolling on the PSD and the DASP programmes; this decline is appropriate.

2.1.4   The quality of learning is good or better in two-thirds of the lessons inspected. In the best classes, students develop the necessary practical administrative and secretarial skills through a balanced range of teaching strategies including well planned individual and group activities. A significant minority of classes, however, are characterised by excessive note-taking and the use of commercial training materials to convey vocational information. As a consequence, the students are not sufficiently involved in their own learning. In the DASP and PSD programmes, there is insufficient emphasis given to developing the skills necessary for the external examinations.

2.1.5   All of the colleges who offer the full-time NVQ level 3 in administration provide a good balance between college-based work and work experience; on average, the students spend the equivalent of one day per week in the workplace. The quality of these work-placements, however, is generally poor with the result that the students have limited opportunities to develop the appropriate administrative, office and supervisory skills in the workplace. As the lecturers have insufficient time to observe and assess students in the workplace, there is an over-reliance on simulated training tasks carried out in

the colleges to confirm occupational competence. In contrast, in one college, the work-placements provide the students with good opportunities to produce work-based evidence and to be assessed in the workplace.

2.1.6   The standards of the students' work on the NVQ level 3 in administration is satisfactory or better in approximately two-thirds of the programmes inspected. In the best examples, the students demonstrate a broad range of occupational skills commensurate with their ability and level of course. Nearly all of the students achieve high levels of competence in IT, for example, they make extensive use of a range of IT applications, including word processing and desktop publishing, to enhance the quality and presentation of their portfolios of evidence.

2.1.7   In the DASP and PSD programmes, the standards of the students' work are generally satisfactory.   Most have good IT skills but there is considerable variation in their understanding of important contemporary business issues, and in one college the standards of the students' practical administrative skills are poor.

2.1.8   Most of the students have good written and oral communication, and numeracy skills. In one college, however, a minority of students on the NVQ level 3 in administration have poor levels of literacy and numeracy and receive inadequate support.

2.1.9   The average retention rates in the curriculum area for the three years prior to the inspections range from good (80%) to excellent (91%) and are generally good at 83%. There are, however, variations in the levels of success across the programmes inspected.   Over the same time period, the average success rate for students who complete their NVQ level 3 in administration is good at 80%. On the externally assessed DASP and PSD courses, the average success rate for those students who achieve the whole qualification is poor at 30%. In a majority of the colleges, most students over the three years prior to the inspections progressed to higher education, employment or further education and training.

2.1.10   In almost all of the colleges the level 3 programmes are managed and co-ordinated well. There are high levels of co-operation among and between

the lecturing staff. In the majority of colleges, however, the course review and evaluation procedures are generally ineffective; they are not sufficiently rigorous in the analysis of the key performance indicators of student retention and success.

2.1.11   Almost all of the teaching staff in the colleges inspected are appropriately qualified and deployed. In four of the colleges, however, most of the staff do not have recent industrial and commercial experience in administration and related subjects.

2.1.12   The quality of the accommodation in most of the colleges is generally good. The training and general classrooms are well maintained and provide a stimulating learning environment.   Most of the colleges have modern IT teaching accommodation with good levels of hardware and software which are of current industrial standards. In a minority of colleges, the accommodation is poorly decorated and maintained, and provides a poor image of the vocational area.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Administration and Office Skills

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. NVQ Level 3 Administration	6	265	218	166	82	76
2. The London Chamber of Commerce and Industry Examinations Board Private Secretary's Diploma	2	73	61	26	84	43
3. OCR Diploma in Administrative and Secretarial Procedures	1	43	39	4	91	10
4. Association of Medical Secretaries, Practice Administrators and Receptionists	1	49	39	39	80	100

Key

Over the three years prior to the inspection in all of the colleges inspected, the <u>total</u> number of students who:

> a - enrolled in the programme
>
> b - completed the programme
>
> c - gained the full award
>
> d - overall rate of retention (%)
>
> e - overall rate of success (%)

2.2   CURRICULUM AREA: ART AND DESIGN

2.2.1   Main Findings

- The colleges generally provide a narrow range of full-time level 3 programmes in art and design, with little provision for part-time students.

- There is significant variation in the arrangements for the development, assessment and accreditation of key skills within colleges.

- The majority of courses are well planned and co-ordinated.

- The quality of teaching ranges from excellent to satisfactory; it is good in over four-fifths of the lessons.

- With very few exceptions, the quality of the students' work is satisfactory or better; around 10% of the work is excellent.

- The quality of the teaching accommodation for art and design is generally poor, and there is inadequate technician support.

2.2.2   The colleges generally provide a narrow range of level 3 programmes in art and design with little provision for part-time students. The full-time programmes include advanced GNVQ in art and design, foundation diploma in art and design, and the national diploma in graphic design. Two of the colleges offer the national diploma in graphic design which duplicates unnecessarily units of the advanced GNVQ in art and design. All of the level 3 provision is confined to daytime attendance. There are no NVQ programmes offered in art and design with little evidence that the needs of employers are assessed, or met. In the majority of advanced GNVQ courses, there is an appropriate range of additional units although the breadth varies significantly between courses. In one college, for example, all students take six additional units whilst, in another, a limited number of additional units are offered only to the more able students. In contrast, in one college additionality is limited to GCE A level subjects in, for example, French and business studies. Inappropriately, a significant minority of students have taken GCE A level subjects in art and design instead of other GNVQ additional units. The arrangements for the

development, assessment and accreditation of key skills vary significantly across the colleges and individual courses. In the advanced GNVQ, there is wide variation in the extent to which the vocational tutors and the key skills tutors collaborate effectively in planning. In the best practice, the key skills of application of number, ICT and communication are integrated, where relevant, into the vocational assignments. In addition, the coverage of units is mapped and there are suitable procedures in place to ensure rigorous and consistent assessment and verification. In the foundation diploma and the national diploma programmes in graphic design, communication and ICT are integrated effectively into the assignment programme, although these key skills are assessed but not accredited. The key skill of application of number is not assessed or accredited in either the foundation diploma in art and design or the national diploma in graphic design.

2.2.3   Recruitment is satisfactory. The entry criteria are suitable and are generally implemented appropriately. In a few cases, exceptions are made and students are recruited on the basis of their experience, ability, motivation and maturity. A significant minority of students are recruited who have poor entry qualifications; this has a detrimental effect on the standards achieved in the key skills of communication and application of number.

2.2.4   The relationships between the staff and students are excellent. The majority of courses are well planned and co-ordinated. In the best practice, a balanced assignment programme is well supported with detailed, practical schemes of work which are prepared by each lecturer in consultation with the course team. The majority of the students are well motivated and are keen to progress to higher education. The quality of teaching ranges from excellent to satisfactory. In 88% of lessons, the quality of the teaching had more strengths than weaknesses, in 9% the teaching had significant strengths whilst 3% had more weaknesses than strengths. Classes are generally paced appropriately, the assignments are suitably challenging and provide students with good opportunities to develop an increasingly independent approach to their work. The majority of lecturers provide varied learning experiences using an appropriate range of teaching approaches. These include demonstration, individual tutorial, whole-class teaching, visits to galleries and relevant businesses and visiting speakers. In a minority of classes, the teaching is poorly structured. For example, in practical classes, the students receive insufficient

guidance and a narrow range of teaching approaches is used, and, in theory classes, the students are passive, there is limited interaction between the lecturer and the students, and there are too few opportunities for the students to engage actively in their own learning.

2.2.5   With few exceptions, the quality of the students' work is satisfactory or better; around 10% of the work is excellent. In the best practice, the students have achieved good standards in a range of technical skills and have developed a good understanding of the design process.   They become involved in productive, independent research to develop and refine their ideas, and to apply an appropriate level and range of techniques and processes in a creative context. In the advanced GNVQ programmes over the last three years, the retention rate is satisfactory at 71% and the success rate of those who complete is good at 88%. In the national diploma programmes over the last three years, the retention rate is satisfactory at 75% and the success rate of those who complete is excellent at 100%. Over the last two years, the retention rate and success of those who complete the foundation diploma in art and design are excellent at 96% and 100%, respectively. Student progression to higher education and employment is good at 86%; the majority of art and design students progress to higher education.

2.2.6   The planning and co-ordination of the courses are generally good. With the exception of the key skills tutors, the members of the course teams responsible for the delivery of the vocational units collaborate effectively in planning the assignment programmes.   In all but one college, there is a systematic approach to quality assurance in which the procedures for course review and evaluation are implemented effectively.

2.2.7   The full-time lecturers are suitably qualified although many require opportunities to update their vocational skills and experience. Associate and part-time lecturers are suitably qualified and in most cases have current and relevant vocational experience. In a minority of courses, staff deployment is poor, with the result, that the specialist expertise of staff is not utilised sufficiently within or across programmes. Two of the colleges have no specialist technician support and, in one college, the technician support is inadequate.

2.2.8   The quality of the teaching accommodation is poor. Studio accommodation is cramped and storage facilities for students' work, learning support materials, practice materials and equipment are inadequate. In two of the colleges, the decor and furnishings are dated and shabby. The range and quality of specialist equipment are satisfactory in around two-thirds of courses. In the other courses, there are deficiencies in the ICT resources, including specialist software, photography and printmaking equipment. There are no 3D facilities in one college. The quality of library materials is generally satisfactory and includes specialist CD-ROMs, videos, periodicals, newspapers, books and other printed materials.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Art and Design

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. Foundation Diploma ** *over 2 years* **	1	48	46	46	96	100
2. Advanced GNVQ	3	254	180	159	71	88
3. National Diploma	1	55	41	41	75	100

Key

Over the three years prior to the inspection in all of the colleges inspected, the total number of students who:

       a - enrolled in the programme

       b - completed the programme

       c - gained the full award

       d - overall rate of retention (%)

       e - overall rate of success (%)

2.3   CURRICULUM AREA: BUSINESS AND MANAGEMENT

2.3.1   **Main Findings**

- Colleges have a satisfactory or better provision at level 3.

- In just over three-quarters of the lessons, the quality of learning is good or better; 25% of the lessons are excellent. In the remaining lessons (23%), weaknesses outweigh strengths in teaching and learning.

- Outside of the key skills classes in IT, there is little use of ICT in teaching and learning.

- The standards of work of most students are satisfactory or better; the majority of students achieve good standards.

- There is insufficient involvement with employers in the design and review of courses.

2.3.2   The colleges have a satisfactory or better provision for full-time and part-time vocational courses at level 3. The provision in the larger colleges is extensive and includes a good range of professional and supervisory courses. The main full-time provision is the advanced GNVQ programme in business which is offered by six of the colleges. One of the colleges, which has been slow to implement GNVQ programmes across the curriculum, offers the national diploma in business and finance in preference to the GNVQ programme. Another college offers the full-time Institute of Accounting Technicians in Ireland (IATI) course to a small number of students in addition to the advanced GNVQ course.   The main part-time provision is the national certificate in business and finance which is offered by all but one of the colleges. Enrolment on this course, however, is small in all colleges and has declined in recent years. The future provision of this course is being reviewed by a minority of colleges. Other part-time courses offered include, IATI and the National Examining Board for Supervisory Management Certificate programme. Most students on advanced GNVQ courses supplement the 12 unit award with six additional units, mostly in business.   Three of the colleges, offer good enrichment programmes in addition to the 18 unit award. One college, for example, offers a well planned student exchange programme and some students take the Duke

of Edinburgh Award and/or the Young Enterprise Programme. Recruitment in a minority of colleges is falling as more local schools offer GNVQ in business and as more students enrol on the advanced GNVQ in IT. Entry qualifications for most level 3 courses are good, with most students possessing four or more GCSE passes at grade C.

2.3.3   In just over 75% of the lessons, the quality of learning is good or better and 25% of the lessons are excellent. The lessons are well planned and the students experience a good range of learning experiences.   Skilful exposition, which is underpinned frequently with reference to contemporary practice in business and the students' personal and work experiences, is supported with effective class discussions and challenging activities such as group work, role play and individual exercises. Where the teaching is less good, much of the work is dull and routine; the students spend excessive periods of time copying material directly from the overhead projector and, in a small number of lessons, relationships are strained. Outside the key skills classes in IT, there is little use of ICT in teaching and learning. Apart from the full-time IATI course, the key skills of application of number and communication are well integrated in most of the full-time level 3 courses. Most of the assignment programmes are well planned and give the students good opportunities to plan, research and evaluate important issues in business and finance. With few exceptions, the assignments are marked appropriately to the standards of the awarding bodies. In nearly all of the colleges, there is a wide variation in the nature of the written comments provided to students; a significant minority of lecturers do not give students sufficient guidance on how to improve their grades. There is little involvement by industry in the design and review of most courses, and, in one college, students on the advanced GNVQ in business do not undertake a planned work experience programme; this is a significant weakness.

2.3.4   The standards of work of most students are satisfactory or better; the majority of students achieve good standards. They have a good understanding of business law, market structures and related pricing strategies, and key accounting terms.   In most cases, the students are well motivated and attendance in class is good. The standards of written work are mostly good and the students take care in the presentation of their work. They have satisfactory or better numeracy skills and most are able to undertake financial calculations

accurately. Although most of the students have good IT skills, full-time students have too few opportunities to apply these skills, for example, most assignments are handwritten. In contrast, many of the part-time students use IT extensively in their assignments. The average retention rate for advanced GNVQ courses is satisfactory at 70% although the rates vary significantly between the colleges from 58% to 81%. The average success rate for those students who complete GNVQ courses is good at 83%; the rates vary from 71% to 94%. The colleges with low retention rates also have low success rates, thus compounding the significant variation in levels of achievement in GNVQ between the colleges. The average retention rate on the national diploma course is satisfactory at 74% and the success rate of those who complete is good at 88%. The average retention rate on the national certificate courses is poor at 58% and only two of the colleges have retention rates in excess of 60%. In contrast, the average success rate of those who complete the national certificate course is excellent at 94%. The retention rates for the professional and supervisory courses are good at 88% and success rates of those who complete are good at 84%. Progression to higher education and employment for full-time students in almost all colleges is good.

2.3.5   Most of the courses are well-managed; the heads of school and course co-ordinators manage their administrative and curricular responsibilities effectively. There are, however, significant variations, both within and across colleges, in the rigour of the quality assurance procedures. In the majority of courses, there are well developed systems to review and evaluate the quality of learning and standards of students' work. In the other courses, the use of review and evaluation is underdeveloped and little action has been taken to address low levels of achievement.

2.3.6   The staff are well qualified and suitably deployed, although the industrial experience of a minority is dated.

2.3.7   Most of the teaching accommodation is well furnished and most students have access to a good range textbooks and journals, and industrial standard IT resources.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Business and Management

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. Advanced GNVQ in Business	6	1185	823	681	70	83
2. EDEXCEL National Diploma in Business and Finance	1	120	89	78	74	87
3. EDEXCEL National Certificate in Business and Finance	6	420	244	229	58	94
4. IATI full-time	1	28	15	7	54	47
5. IATI part-time		295	264 (180 entered full award)	153	90	85*
6. NEBSM Certificate	1	48	44	41	92	93

Key

Over the three years prior to the inspection in all of the colleges inspected, the total number of students who:

> a - enrolled in the programme
>
> b - completed the programme
>
> c - gained the full award
>
> d - overall rate of retention (%)
>
> e - overall rate of success (%)

* based on students who sat and gained full qualification

2.4 CURRICULUM AREA: CONSTRUCTION AND THE BUILT ENVIRONMENT

2.4.1 Main Findings

- The level 3 programmes for technicians are provided through the advanced GNVQ programme in construction and the built environment in half of the colleges and through the national diploma programme in construction in the other half. There is a decline in the numbers of students enrolling on full-time technician level programmes in construction and in their entry qualifications.

- There is a reduction in the range of level 3 craft programmes provided in each college. The number of trainees recruited to level 3 craft programmes is highest in wood occupations but lowest in brickwork. The numbers recruited to programmes in mechanical services engineering (plumbing) remains steady and are currently meeting the recruitment needs of employers.

- The quality of the work produced by students and trainees who gain full awards is to national standards.

- The quality of teaching in almost all lessons is good or excellent.

2.4.2 All of the colleges provide full-time programmes to enable young people to gain technician qualifications at level 3 which enable them either to gain employment directly in the construction industry or to progress to higher education. About half of the colleges provide the advanced GNVQ programme in construction and the built environment and half provide the national diploma in construction; the development of GNVQ programmes has been slow. Most of the colleges providing the national diploma programmes in construction also provide opportunities for part-time students to gain national certificates in specialist disciplines such as civil engineering or building studies. Colleges providing the advanced GNVQ programme do not make provision for part-time students at technician level. In addition to the technician level programmes, most of colleges provide craft level programmes, mainly in trowel

trades, wood occupations or mechanical engineering services (plumbing). The range of craft programmes has reduced in most colleges, mainly in the decorative and wet trades. With the exception of the Belfast Institute of Further and Higher Education, most colleges provide programmes in no more than three of the construction crafts and many provide training only in two of the construction crafts.

2.4.3   Recruitment to technician level programmes in construction and the built environment has generally declined over the last three years. The decline in the number of students recruited to GNVQ programmes in construction and the built environment is more marked than in the national diploma programmes in construction. One college which has provided the advanced GNVQ programme since 1996 has experienced a drop in recruitment of 55%. With a few exceptions, there has been a decline in the level of GCSE qualifications achieved by students entering technician programmes. Increasingly, students are recruited to these programmes with the minimum entry qualifications particularly in English and mathematics. The numbers recruited to programmes in brickwork and plumbing at level 3, remains steady at about ten in each intake. The numbers in wood occupations tend to be higher than in the other craft programmes; most colleges provide a training programme in wood occupations whereas programmes in brickwork and plumbing are only provided by about half of the colleges. The trainees recruited to plumbing have good GCSE grades on entry. They have, on average, seven GCSE grades in the range B-E and most achieve C-E grades in English and mathematics.

2.4.4   The technician programmes in construction and the built environment are well planned and co-ordinated. A suitable range of units is provided to enable the students to progress to higher level courses in the full range of professional disciplines in the construction industry. The lecturers prepare thoroughly for each of the units and the students engage purposefully in activities which are relevant and which enable them to develop their understanding of the work undertaken by each of the design professions in the industry. Good opportunities are provided for students to engage in practical surveying activities using levels, theodolites and modern electronic equipment. The students make good use of computers for calculating heat losses from buildings in environmental science but generally have insufficient opportunities

to participate in practical laboratory work in structural mechanics and environmental science. In almost all the classes observed, the work is conducted at an appropriate pace but, in a small number of lessons, there is an inappropriate emphasis on taking notes and on routine tasks which were not sufficiently challenging for the more able students. In the craft level programmes there is a good balance between practical work and underpinning knowledge. The practical work undertaken by the students is relevant to the work they undertake in the workplace. The quality of the work-placements for almost all the trainees is good and enables them to develop competence across the full range of units required for the NVQs.

2.4.5   The students and trainees on the full-time and part-time programmes are generally well-motivated. They attend and participate well in the classes and co-operate with other students and with their lecturers. Over the last three years, the average retention rates on the full-time technician programmes are modest at 69% on the GNVQ programmes and 67% on the national diploma programmes. The average success rate for the students who complete the full-time programmes is in the range 83% to 100%. The average retention rates on the part-time national certificate programmes in building studies and civil engineering are satisfactory at 71% and 72%, respectively, and excellent on the national certificate programme in building services engineering at 95%. The success rates of the students who complete these programmes are good at 84% or excellent at 94%; one programme achieved a poor average success rate of 50%. On the level 3 craft programmes, the average retention and success rates of those who complete are good or excellent, ranging from 84% to 100%. Progression rates on the craft and part-time programmes are excellent. Almost all of the trainees in these programmes remain with their employers on completion of the training programmes. Approximately 88% of the students on the full-time technician programmes progress to full-time programmes in further or higher education and about 1% progress immediately to employment. The destinations of about 10% are unknown.

2.4.6   The administration of the construction programmes is undertaken well by the course tutors and teams.

2.4.7   Lecturers have appropriate qualifications and relevant experience. In most of the colleges, the staff maintain close links with industry through their

professional institutions or through placing students for work experience and training. These links are used well to keep staff up-to-date with current developments.

2.4.8   Two of the colleges have modern accommodation for students and trainees in construction. In two of the colleges, the accommodation is generally satisfactory but does not provide well-equipped laboratory accommodation for construction. The equipment needed is mainly to support practical work in environmental science and structural mechanics. Two of the colleges have poor accommodation for construction with inadequate accommodation for wood machines and general classrooms in need of refurbishment.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Construction and the Built Environment

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. Advanced GNVQ in Construction and the Built Environment	3	184	127	107	69	84
2. National Diploma in Construction	3	199	134	111	67	83
3. Wood Occupations	3	94	81	68	86	84
4. Mechanical Engineering Services	2	68	66	64	97	97
5. Trowel Trades	1	6	6	6	100	100
6. National Diploma in Estate Management	1	6	6	5	100	83
7. National Certificate Building Studies	1	17	12	6	71	50
8. National Certificate Civil Engineering	2	61	44	37	72	84
9. National Certificate Building Services Engineering	1	19	18	17	95	94

Key

Over the three years prior to the inspection in all of the colleges inspected, the total number of students who:

> a - enrolled in the programme
>
> b - completed the programme
>
> c - gained the full award
>
> d - overall rate of retention (%)
>
> e - overall rate of success (%)

2.5 CURRICULUM AREA: HEALTH AND SOCIAL CARE

2.5.1 Main Findings

- The majority of colleges provide a broad range of full-time and part-time programmes. Almost all provide the advanced GNVQ in health and social care and there has been a general increase in the number of programmes in childcare.

- Enrolments on the part-time national certificate programme in social care have declined significantly in recent years. In contrast, there is a substantial increase in enrolments on the part-time NVQ level 3 programme in early years care and education.

- Most of the students are well motivated and keen to do well. The attendance of a minority of students on the GNVQ programme is poor.

- The quality of work produced by the students who achieve full awards is good and is consistent with national standards.

- Most of the students on the full-time programmes in health and social care and childcare achieve good standards in their oral and written communication. Students generally achieve satisfactory standards in the key skills of IT and application of number.

2.5.2   The number of programmes in health and social care at level 3 has increased significantly over the last three years and ensures a framework which enables students to progress and gain further qualifications. The largest numbers recruited are on the advanced GNVQ in health and social care programme which is offered in almost all of the colleges. The numbers enrolled on this programme vary considerably across the colleges with one college recruiting an average of 90 students each year over the past three years and another recruiting, on average, only 26 each year. Low enrolments and poor retention in half of the colleges providing the GNVQ programme result in all of the students having to take the same additional and optional units irrespective of their career aspirations. Almost all of the students on the GNVQ programme

have at least five GCSEs at grade C or equivalent on entry to the programme. In a few of the colleges, the majority of students have at least eight GCSEs at this grade. The average entry qualification of students on the Council for Awards in Children's Care and Education (CACHE) Diploma programme is four GCSEs at grade C or equivalent.

2.5.3　　Recruitment to the part-time national certificate in social care has declined significantly in recent years. In contrast, there is an increase in the number of colleges providing the NVQ level 3 in early years care and education and in the numbers enrolling on this programme. There is considerable variation in the entry qualifications of students on part-time programmes. These range from degree level awards to no formal academic or vocational qualifications. Most of the colleges make good provision for mature students returning to study after many years by building in appropriate study support.

2.5.4　　There is good provision for the key skill of communication; students have wide-ranging opportunities to develop their oral and written communication skills in most classes and during work experience. The key skills of application of number and IT are provided through discrete classes with little evidence of planned integration in the vocational units. In the three colleges which provide the CACHE Diploma in Nursery Nursing, there is no provision for the students to develop their skills in numeracy within the programme.

2.5.5　　In all of the colleges, there are good relationships between the lecturers and students, and among the students. The lecturers monitor the students' progress regularly and almost all provide good levels of individual and group support. The programmes are generally well planned. In almost all of the colleges, students on the full-time programmes have the opportunity to gain additional qualifications such as a certificate in first aid or basic food hygiene. The quality of teaching and learning is excellent in around a fifth of the lessons and good or satisfactory in almost all of the remainder. In the best practice, lecturers combine a variety of teaching methods such as direct exposition and group work. They question and set tasks which provide opportunities for students to relate theory to the vocational context. They also provide helpful and supportive comments to enable them to improve and progress, for example, when they are making oral presentations to the class. In contrast, in a small

number of lessons, the planning is poor and the students are not challenged by the tasks set; they are not encouraged sufficiently to analyse and discuss topics critically and there is excessive copying of notes from an overhead projector. In the assessment of students' work most of the lecturers provide detailed and helpful comments to promote improvement although there is generally room for colleges to improve consistency in this area through the development of a marking policy. The planning and co-ordination of work experience is good in most of the colleges and the students gain significant benefits from periods spent on work-placement.

2.5.6   Most of the students are well motivated and keen to do well. The attendance of a minority of students on the GNVQ programme is poor. Over the last three years, the average retention rates on the full-time level 3 programmes in health and social care are satisfactory and they are modest on the part-time programmes. The average retention rate for the GNVQ programme is 71% and for the national diploma programme it is 69%. Retention rates on the part-time health and social care programmes are poor at 59%. On the full-time programmes in childcare, the retention rates are good at 84% for the CACHE diploma and satisfactory at 75% for the national diploma. Retention rates are satisfactory at 79% for the part-time diploma in nursery nursing and good at 81% for the NVQ level 3 in early years care and education.

2.5.7   Over the last three years, the average success rate of the students who complete the GNVQ programme is satisfactory at 72% and for the national diploma in social care it is good at 80%. The average success rates of those who complete the full-time childcare programmes are excellent at 93% in the CACHE diploma and 90% for the National Diploma in Childhood Studies. The part-time programmes in social care achieve good average success rates at 87% and, in the part-time childcare programmes, they are excellent at 97%.

2.5.8   The co-ordination and administration of the health and social care programmes are undertaken well by most of the college managers and by most of the course tutors and teams. In the majority of programmes, quality assurance procedures are effective in enabling course teams to identify accurately the strengths of the programme and areas in which improvement is required.

2.5.9   Lecturers in most of the colleges have appropriate qualifications and relevant vocational experience. Whilst tutors maintain good links with staff from relevant health and social care agencies, a significant minority of lecturers have been out of care practice for at least ten years and would benefit from the opportunity of placement in a health, social care or educational setting.

2.5.10   The quality of the teaching accommodation is good in two of the colleges, satisfactory in four of the colleges but poor in one college. Whilst students in most colleges have access to a good range of books and other resources, both staff and students have limited access to modern ICT equipment in a significant minority of colleges.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Health and Social Care

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. Advanced GNVQ Health and Social Care	6	765	542	393	71	72
2. CACHE National Diploma in Nursery Nursing	3	171	143	133	84	93
3. BTEC National Diploma in Childhood Studies	1	52	39	35	75	90
4. BTEC National Diploma in Social Care	1	134	93	74	69	80
5. BTEC National Diploma in Nursery Nursing (part-time)	1	19	15	15	79	100
6. BTEC National Certificate in Social Care	4	160	94	82	59	87
7. NVQ Level 3 in Early Years Care and Education	3	156	127	121	81	95

Key

Over the three years prior to the inspection in all of the colleges inspected, the total number of students who:

> a - enrolled in the programme
> b - completed the programme
> c - gained the full award
> d - overall rate of retention (%)
> e - overall rate of success (%)

2.6   CURRICULUM AREA: INFORMATION TECHNOLOGY AND COMPUTING

2.6.1   Main Findings

- Over the past three years, there has been a significant increase in the number of full-time students recruited to programmes in computing and IT.

- Although a satisfactory range of full-time programmes is offered at level 3, the part-time provision is inadequate.

- The quality of teaching is good or better in two-thirds of the lessons.

- The standard of students' work is generally good.

- There is insufficient integration of ICT to support teaching and learning strategies.

- The majority of colleges provide students with sufficient access to good quality computing resources.

2.6.2   The colleges offer a satisfactory range of programmes in computing and IT at level 3. These include advanced GNVQ IT, national diploma and certificate programmes in computer studies and, national diploma and certificate courses in IT applications. Three colleges have given insufficient consideration to broadening provision by introducing advanced GNVQ programmes in IT. Although four of the colleges continue to offer computer studies at national diploma level, a significant minority of the units are in need of revision to bring them into line with current practices in industry. It is inappropriate that three colleges have little or no part-time provision at this level, given that IT is a high priority skills area.

2.6.3   Over the last three years, the number of students taking full-time level 3 courses in computing and IT has almost doubled, the biggest growth has been in GNVQ programmes. Over the same period, the number of part-time students at this level has remained consistently low.

2.6.4   The quality of teaching is good or better in two-thirds of the lessons inspected. The majority of lecturers prepare well and provide a good variety of learning experiences for the students. In the best lessons, whole-class exposition is used effectively to introduce computing concepts and explain theories. In practical lessons, the skills of the students are developed at a pace appropriate to their ability and the lecturers demonstrate effectively software functions to small groups and individual students. In just under one-third of the lessons, however, the weaknesses in teaching outweigh the strengths. In these lessons, the teaching and learning approaches are not varied sufficiently and the majority of students are passive and not challenged sufficiently.

2.6.5   While the majority of colleges develop students' programming skills through modern and relevant languages, it is inappropriate that two colleges rely significantly on dated programming languages. The quality of learning materials used in almost all colleges is good. In two colleges, good use is made of ICT in the delivery of information to students. In contrast, in the majority of colleges, the use of ICT to support learning in this curriculum area is underdeveloped. Only a small number of lecturers make effective use of data projection equipment and presentation software to enhance the delivery of lessons. Around half of the students use the Internet effectively as a source of research and technical information. The majority of lecturers are thorough and consistent in their assessment of the students' work. Although the majority of colleges have good links with employers, it is inappropriate that students on GNVQ programmes in two colleges are not provided with the opportunity to undertake work-placements. In contrast, two colleges make good use of industrial visits and visiting speakers.

2.6.6   The relationships between lecturers and students are generally good. Most are well-motivated and keen to progress to higher education courses in computing and IT. The standard of work produced by most of the students is satisfactory or better; much of it is good. The students generally acquire the knowledge, understanding and practical skills appropriate to their vocational programmes. Most students make good use of IT skills to present written work.

2.6.7   Most students have developed a good knowledge and understanding of IT concepts and theories and have a sound technical knowledge about computer systems. The majority of them have developed good skills in the design and implementation of computer programmes in modern programming

languages, including the design of Internet web pages. Most can use effectively the advanced features of software applications such as spreadsheets and relational databases to problem solve and effectively handle information. In a minority of colleges, however, the students have insufficient opportunity to design programs with object-orientated and event driven features, and to develop skills in multimedia and web-page design. Most students can evaluate effectively the application of IT in industry and commerce. Nearly all level 3 part-time students use their workplace well as a source of research evidence for assignment work.

2.6.8   The average retention rates on full-time level 3 computing and IT programmes in the three years prior to the inspections are satisfactory at 72%; success rates of those who complete are good at 81%. Over the same period, retention rates on part-time programmes are modest at 61% and success rates of those who complete are good at 84%.

2.6.9   The majority of level 3 programmes in computing and IT are planned and co-ordinated effectively. In most colleges, the systems for the internal verification of students' work are generally rigorous.

2.6.10   Nearly all staff are appropriately qualified and deployed. Although most colleges have staff with commercial and industrial experience, few staff have recent industrial experience in e-commerce business. In the majority of colleges, the staff development activities do not reflect sufficiently the rapidly changing IT environment.

2.6.11   Most colleges have sufficient computer teaching accommodation to deliver the requirements of the vocational programmes in computing and IT. The quality of the teaching accommodation and furnishings is poor in two of the colleges, and satisfactory or better in the remainder. Insufficient consideration is given to the effects that room layouts have on the styles of teaching and learning. There is scope to improve displays of students' work and space for students to work away from the computers. The provision of computing resources is satisfactory and often good. Nearly all colleges have invested recently in the improvement and expansion of effective computer networks and equipment. Almost all students have good access to high specification computers, modern software applications and the Internet. Access to computing resources for students outside of their timetables is poor in two of the colleges, but good or better in the remainder.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Information Technology and Computing

Programme	Number of programmes inspected	a	b	c	d	e
					%	%
1. Advanced GNVQ	4	150	101	82	67	81
2. National Diploma Computer Studies	4	290	214	174	74	81
3. National Certificate Computer Studies	2	45	30	26	67	87
4. National Certificate IT Applications	1	32	16	15	50	94
5. Advanced Diploma in IT Applications	1	8	6	3	75	50

Key

Over the three years prior to the inspection in all of the colleges inspected, the total number of students who:

> a - enrolled in the programme
>
> b - completed the programme
>
> c - gained the full award
>
> d - overall rate of retention (%)
>
> e - overall rate of success (%)

2.7 CURRICULUM AREA: MECHANICAL ENGINEERING

2.7.1 Main Findings

- There is a suitable range of craft and technician courses at level 3 in mechanical engineering.

- The numbers of students enrolling in full-time mechanical engineering courses are generally satisfactory but part-time technician and craft courses fail consistently to enrol viable numbers; very few females enrol.

- In the design of full-time technician courses, there are at least three conflicting tensions which course leaders and senior college managers have not resolved successfully: planning for progression to higher education; developing students' practical skills to a level high enough to enter modern industry to work as technicians; and the steady reduction in the overall hours allocated to full-time courses.

- In over three-quarters of the lessons, the quality of teaching is good or better.

- Students gaining full awards are producing work of good quality which meets national standards and enables them to progress in their engineering careers.

- The accommodation used by engineering students is not to modern industrial standards in five of the six colleges and, in three of the colleges, it is of a poor standard.

2.7.2   The colleges provide a suitable range of courses at level 3 in mechanical engineering.   Vocational education provision in mechanical engineering focuses on technician students gaining national awards and craft students gaining City and Guilds (C&G) awards. The vast majority of full-time technician students undertake national diploma programmes rather than advanced GNVQ programmes, which have generally poor recruitment. The slow pace of change from national diplomas to advanced GNVQs is not in line with developments in the UK-wide framework of qualifications. In only a few

colleges is the provision of NVQ units an essential part of the planned programme of work for students on full-time technician courses. Colleges have regularly updated their national diploma units to ensure that new technologies are included. All part-time technician students take a national certificate, normally as additional studies to an NVQ at level 3 and to enhance their opportunities to progress to higher level studies and/or job promotion. Similarly, nearly all part-time craft students take a C&G part 2 award as additional studies to an NVQ at level 3. The C&G 229 part 2 course in fabrication and welding was inspected in three colleges and the C&G 228 part 2 course in mechanical production in only one college.

2.7.3   In the past three years, the numbers of students enrolling in full-time mechanical engineering courses are generally satisfactory but part-time technician and craft courses fail consistently to enrol viable numbers. There was a significant increase in the enrolment numbers in the one college which offered an NVQ at level 2 as additional units within an advanced GNVQ programme. The part-time technician and craft courses attract consistently low numbers of students and often the first and second year students are placed in a composite class to ensure viability. There are very few female students on mechanical engineering programmes. On entry to all courses, a significant minority of technician and craft students are weak in mathematics and science.

2.7.4   In over three-quarters of the lessons the quality of teaching is good or better. Full-time and part-time technician students are provided with a range of generic and optional vocational units. An appropriate range of assessment methods is used. Students receive good opportunities to develop their key skills within vocational contexts. An appropriate emphasis is placed on engineering science, mathematics and modern technology to enable the full-time students, normally 16-19 year olds, to progress to higher education. However, opportunities for students to develop their practical skills to a level high enough to work as technicians in modern industry are often poor. For example, additional units in mathematics enable those students wishing to progress to higher education to do so but this is at the expense of providing sufficient time to develop a broad enough range of basic engineering workshop skills, laboratory test and diagnostic skills, and practical skills in modern computerised manufacturing and control of power systems. In only one of the six full-time courses do students take an NVQ level 2 award along with their

main studies. All technician students receive excellent opportunities to develop their computer-aided drafting skills and to develop general IT skills.

2.7.5   The C&G 229 and C&G 228 part 2 courses offer part-time craft students a good mix of theory and practical application. However, in the C&G 229, the actual choice of units available within each college is restricted by the capacity of the equipment to deal with thick steel plate in the fabrication and welding workshops. In two of the three colleges providing craft courses, the standards of teaching in most lessons are consistently satisfactory or good. However, some theory sessions are too long and fail to engage the students sufficiently in group discussions and in laboratory-based activities. More use should be made of modern ICT facilities. The planning in one college is very poor, for example, students taking the C&G 229 were not able to undertake relevant practical work because no thick steel plate was in stock even though one-third of the time which students spend in the college is within the workshop.

2.7.6   Most full-time and part-time technician students develop satisfactory levels of knowledge and understanding of engineering fundamentals including manufacturing processes, engineering mathematics, engineering science, properties of materials and the engineering use of materials. However, the practical manufacturing skills of full-time students are often underdeveloped and the removal of design, manufacture and commissioning projects from their curriculum, due to reductions in overall course time, has reduced significantly their capability to work directly as technicians in industry. The students in only one of the three national diploma programmes and in only one of the three advanced GNVQ programmes achieve high enough standards in modern computer-aided manufacture and the control of power systems. The majority of full-time and part-time technician students develop computer-aided drafting skills to a standard which fits them well for work in industry. In general, their IT and application of number skills are well developed and they display satisfactory to good communication skills. In contrast, craft students in the C&G 229 and the C&G 228 courses do not develop computer-aided skills and their key skills of IT, communication and application of number are generally weak. They display a satisfactory understanding of craft theory. The levels of motivation displayed by students vary widely across both craft and technician courses. High levels of motivation are evident in the national diploma courses

but in only one of the advanced GNVQ courses. In the part-time craft and technician courses, the motivation of mature employees is normally high. Retention rates are modest in the full-time courses and satisfactory in the part-time courses. The overall average for all the courses is modest at 67% and indicates the need for colleges to focus more on entry qualifications, teaching strategies and extra support for weaker students, particularly those who are weak in mathematics. Success rates for full-time students who complete are good at an average of 85% and are satisfactory for part-time students at 74%. The exception is the C&G 229 course in fabrication and welding where the retention rate is modest at 67% but the success rate of those who complete is poor at only 56%. Students in this vocational area attend erratically even though colleges are in regular contact with their employers. In general, these students are more regular in their attendance when they are employed by companies with training departments which require regular progress reports from college staff. The majority of full-time technicians progress to higher education and about one-third to full-time jobs. Craft students already have jobs and few of them progress to higher education.

2.7.7   The management of mechanical engineering is good in two colleges and generally satisfactory in the other four colleges. In each of the two colleges where the management is good, the head of department has a clear grasp of the curriculum issues facing engineering, works closely with industry and is supported strongly by the course teams. Most of the course co-ordinators ensure that the courses run effectively although much of their time is spent on administrative duties rather than in developing the curriculum. The course team structure, common in national courses, is now beginning to operate for C&G courses and, as a result, is improving the coherence of the courses. In the design of full-time technician courses, there are at least three conflicting tensions which course leaders and senior college managers have not resolved successfully: planning for progression to higher education; developing students' practical skills to a level high enough to enter modern industry to work as technicians; and the steady reduction in the overall hours allocated to full-time courses.

2.7.8   Staff hold suitable vocational qualifications and are deployed appropriately. In each college, the majority of lecturers have been involved in some curriculum development as part of their normal duties and this has led to

some useful staff development in areas such as computer-aided drawing and modern manufacturing processes. The majority have also received training in the use of ICT facilities but most have not progressed to using ICT regularly as a teaching tool in classrooms or in learning resource centres. Most staff have relevant industrial experience but it was gained several years ago. Few lecturers have worked in industry for the last five years although, in four of the six colleges, at least one lecturer was released to work in industry during 1999/2000 under the Lecturers into Industry Initiative.

2.7.9   The accommodation for engineering is not to modern industrial standards in five of the six colleges inspected and in three of the colleges it is of a poor standard. This poor accommodation hinders the development of students' self esteem and confidence in their choice of career, and presents a poor image of engineering to potential recruits. In only two of the six colleges is the equipment to the standards required by industry. In the other four colleges, the standard of equipment is never less than the minimum required to deliver the level 3 courses but there are major deficiencies in the areas of modern computerised manufacturing equipment and control of power systems.

OVERALL AVERAGE RETENTION AND OUTCOMES FOR THE THREE YEARS PRIOR TO THE FOCUSED INSPECTION

Curriculum Area: Mechanical Engineering

Course	Number of courses inspected	a	b	c	d	e
					%	%
1. Advanced GNVQ	3	136	95	79	70	83
2. BTEC National Diploma	3	329	205	176	62	86
3. BTEC National Certificate	4	127	93	79	73	85
4. C&G 229 Fabrication	3	116	78	44	67	56
5. C&G 228 Production	1	27	24	22	89	92

Key

Over the three years prior to the inspection in all of the colleges inspected, the <u>total</u> number of students who:

> a - enrolled in the course
>
> b - completed the course
>
> c - gained the full award
>
> d - overall rate of retention (%)
>
> e - overall rate of success (%)

2.8   CURRICULUM AREA: APPLICATION OF NUMBER

2.8.1   The quality of the provision for numeracy and the standards of the students' work vary considerably across and within the colleges inspected. All colleges provide timetabled classes in application of number, mathematics or quantitative methods on GNVQ and most national diploma and certificate programmes.   In programmes leading to NVQs and other vocational qualifications, only a minority of colleges provide timetabled support for learning in application of number. Non-vocational courses in mathematics, science and computing are provided by a minority of colleges for students wishing to develop suitable skills to meet the university entrance requirements for undergraduate degree programmes in mathematics or science. All colleges provide repeat GCSE classes in mathematics for full-time students who do not have a grade C before they enrol on their vocational courses.

2.8.2   In most colleges, there are significant weaknesses in the planning and delivery of the key skill of application of number on the advanced GNVQ programmes. There is no effective initial assessment of the students' prior attainments in mathematics and the learning tasks take little account of their individual needs and abilities. As a result, a minority of students who enter their programmes with poor levels of achievement in mathematics find the work too demanding and are unable to improve significantly their competence in numeracy.   Students who enter the programmes with high levels of attainment in mathematics are not given the opportunity to progress beyond level 3 in application of number. In most lessons, the students are provided with narrowly structured mathematical learning activities which are too theoretical and are not set in suitable vocational contexts. They lack motivation and do not make sufficient progress in using and applying a suitable range of skills in numeracy to an appropriate standard. Across the colleges, the students' progress is assessed and recorded systematically, though, in a minority, there is too much emphasis on written tests. In a minority of colleges, the internal verification systems are not co-ordinated effectively and the lecturers do not set and maintain appropriate standards for the development of numeracy across all vocational areas.

2.8.3   In a minority of colleges, the provision for application of number on advanced GNVQ programmes is co-ordinated and implemented effectively over

both years of the programme. In these colleges, the teaching and learning approaches take account of the students' mathematical capabilities and encourage them to explore and apply mathematical techniques in realistic vocational contexts. They are provided with challenging and vocationally relevant tasks and engage in different modes of learning including investigations and practical projects. There are good opportunities for them to develop an appropriate range of mathematical knowledge, understanding and skills. The students achieve good standards in their work and make good progress in developing their competence in application of number to level 3.

2.8.4   In most national diploma and certificate programmes across all colleges, the provision for the common skill of applying numeracy is well planned and implemented. The programmes in construction, engineering, computer science and science include timetabled lessons in mathematics or quantitative studies which provide most students with good opportunities to develop and use a wide range of mathematical knowledge and skills in their vocational work. The students engage in challenging learning activities and are expected to achieve high standards in applying numeracy. A variety of teaching and learning approaches is used to motivate the students including mathematical investigations and solving problems using computer-aided design techniques. As a result, most students develop effectively the confidence and competence to use and apply appropriate numerical techniques in relevant vocational contexts to an appropriate standard. Although most students are recruited with suitable qualifications in mathematics, a minority have less than the minimum entry requirements. They are unable to cope sufficiently with the mathematical demands of the learning tasks, particularly those required to study the optional unit in mathematics on the engineering programmes. As a result, these students do not develop sufficient competence in applying numeracy. In most of the non-technical national diploma and certificate programmes there is no planned and effective provision to develop the students' competence in applying numeracy. In these programmes, the standards set and expected by lecturers are too low and the students demonstrate little interest in using and applying numeracy in their vocational work. As a result, they make little progress in their mathematical learning and do not achieve appropriate standards in using and applying numeracy.

2.8.5   In programmes leading to NVQs and other vocational qualifications, there is considerable variation across the colleges in the quality of the provision for application of number. In most colleges, although the learning activities provide the students with suitable opportunities to develop the numerical requirements of the NVQs, there is no effective planning for the development and award of application of number to at least level 2. As a result, there is limited timetabled support to ensure the students develop an appropriate range of mathematical knowledge and skills and apply them competently in suitable vocational contexts.   When they commence their NVQ programmes, a significant minority of students have important weaknesses in mathematics which are not identified and addressed with suitable support programmes. They have difficulty carrying out simple calculations and have poor mental skills. Most students do not achieve the standards of which they are capable in applying numeracy. In a minority of colleges, most NVQs programmes are well planned to provide students with additional learning experiences in applying numeracy in vocational work. In these colleges, the quality of the teaching is good and takes account of the students' wide range of mathematical abilities and their prior achievement.   The standards achieved by the students in their vocational work are good and they are competent in the key skill of application of number to at least level 2.

2.8.6   The key skill of application of number is not well managed and implemented in most colleges.   They do not have coherent policies and strategies to ensure all students are provided with the learning support to improve their competence to the standards of which they are capable. There is a need to assess the mathematical capability of all students when they enrol to ensure the teaching and learning approaches take sufficient account of their individual needs and abilities. Appropriate internal verification systems need to be established in all colleges to ensure lecturers implement consistently across all vocational areas the standards required to deliver application of number to level 3.

2.9   CURRICULUM AREA: COMMUNICATION

2.9.1   The support provided for students in the key skill of communication varies significantly both within and across colleges. All students on advanced GNVQ programmes are required to reach level 3 in this key skill and nearly all colleges provide weekly timetabled classes which are taught mostly by specialist tutors in communication. In a minority of colleges, the vocational tutors take responsibility for the support and the assessment of communication. Only a minority of colleges provide timetabled support in communication for national diploma/certificate and NVQ programmes; in most instances, the key skill is integrated into the programme of study. Students on national diploma and certificate programmes work towards the development of the common skill of communication. Trainees registered on Jobskills programmes who are working towards NVQ level 3 are required, depending on their vocational area, to attain level 2 or 3 in communication. One of the colleges, however, has no formal arrangements for the development and assessment of trainees' competence in communication. The provision for NVQ courses outside Jobskills and for the other vocational programmes at level 3 is poor; few of the students have opportunities to gain accreditation in communication. Opportunities for full-time level 3 students to retake GCSE English are provided in all colleges but the uptake in the majority of colleges is poor.

2.9.2   In most colleges, there are weaknesses in the planning and development of communication on GNVQ programmes. With the exception of one college, little account is taken of the students' abilities and prior achievement. Much of the learning is the same for all students; it is not sufficiently challenging for some and more focused support is required for a small number of students. Most of the key skills and vocational tutors have well developed programmes to ensure adequate coverage of the performance criteria. Typically, the course teams plan a teaching programme which is well co-ordinated with the vocational assignments and helps the students identify appropriate evidence for the key skill. The completion of the tasks, however, often dominates the programme and, consequently, there is insufficient emphasis placed on developing the students' competence in communication and on advancing their understanding of their vocational area through talking and listening, reading and writing.

2.9.3   The GNVQ vocational assignments in most colleges frequently give the students good opportunities to make effective use of the library, CD-ROMs and the Internet to research sources of information relevant to the vocational area. In a majority of cases, however, the assignment briefs are over-structured and there is little opportunity or requirement for the students to demonstrate a critical understanding and application of the researched material. In most programmes, the written work is marked carefully and while the tutors provide appropriate written feedback to help the students address weaknesses in punctuation and spelling, insufficient attention is given to the substance of what and how it is being communicated. The students in most colleges, make good use of oral presentations in their assignments and work-related activities. In two colleges, there are too few opportunities for the students to develop their oral skills beyond short factual responses to direct questioning.

2.9.4   In most colleges, the standards achieved by students on GNVQ programmes are sufficient for them to undertake their vocational tasks.   In many instances, however, the students are not being challenged to progress to the levels of which they are capable.

2.9.5   The planning and implementation of the common skill of communication on BTEC programmes is satisfactory in most colleges. Most of the students have good opportunities to produce written assignments, individual work-related projects and oral presentations which are effective in developing their vocational knowledge. The standard of the students' work is variable but is mostly satisfactory. Most of the assignments are word-processed and are well presented.   In two colleges, however, there are significant weaknesses in the marking of students' work. For example, spelling mistakes and punctuation errors in the students' work are not identified or corrected. In a minority of the colleges, the assignment programmes are insufficiently challenging for students to develop a broad range of communication skills. In completing the assignments, much of the work is confined to reproduction of factual information.

2.9.6   In a minority of colleges, trainees on NVQ level 3 programmes are initially assessed to determine their ability over a range of communication tasks. The outcomes of the initial assessment procedures, however, are not used effectively to match work to their needs and prior achievements.   In the

majority of colleges, insufficient attention is given to developing the students' and trainees' written skills. Tasks in the main are over-directed and much of the work consists of short responses to structured questions, and in a minority of instances, are copied directly from texts and notes provided by the lecturers. Students and trainees, consequently, have too few opportunities to plan and compose longer pieces of work, or to write for variety of purposes and a range of audiences. The standards of the students' and trainees' written work are in most cases satisfactory. The majority cope satisfactorily with the language of the set tasks and the written work in their NVQ portfolios is well organised and presented. The oral communication skills of most of the students and trainees are satisfactory.

2.9.7   The arrangements for the development and assessment of the key skill of communication vary considerably across and within colleges.   The lecturers are generally not well-informed about the students' prior achievements and the use of initial assessment in communication is underdeveloped. As a result, the communication tasks provided for the more able students are insufficiently challenging and there is little opportunity for them to progress while for others more support is required.

PART 3

CONCLUSION

3.1   The findings from the survey indicate clearly that the quality of the level 3 provision in the seven colleges is generally good, and the standards achieved by the students who complete are high. These significant achievements would not have been possible without the dedication and commitment of teaching staff, and the support provided by senior and middle managers in colleges.

3.2   The further education sector will need to consider the strategic implications of the findings to ensure that the level 3 provision and the standards achieved by students are further enhanced and strengthened. This will be necessary if the sector is to provide a stronger and more targeted response to the needs of the economy in Northern Ireland.

3.3   Areas for development include:

- The relatively low recruitment to mechanical engineering and IT.

- The generally poor planning and supervision of students on work experience, and the lack of involvement of employers in their training.

- The generally poor quality of provision for the key skills of application of number, communication and IT.

- The minimal use which is made of ICT in teaching and learning across the majority of curriculum areas.

- The high levels of full-time students who fail to complete their programmes.

- The lack of opportunities in colleges for students to participate in social and recreational activities with health benefits.

- The lack of child care facilities for students.

- The generally low levels of recent industrial experience of the majority of staff working on vocational programmes.

- The generally poor teaching accommodation and levels of equipment for mechanical engineering.

PART 4

ANNEX 1

Table 1

Enrolments[1] in level 3 provision in the FE sector by mode of attendance[2], 1995/96-1999/2000

Year		No	%
1995/96	Full-time	9,716	41
	Part-time	7,910	14
	Total	17,626	22
1996/97	Full-time	10,271	41
	Part-time	8,717	15
	Total	18,988	22
1997/98	Full-time	11,010	44
	Part-time	9,166	15
	Total	20,176	24
1998/99	Full-time	12,687	53
	Part-time	13,491	22
	Total	26,178	30
1999/2000	Full-time	11,722	49
	Part-time	14,584	22
	Total	26,306	29

Source: FESR

[1]   figures relate to snapshots of enrolments at 1 November each academic year

[2]   percentages relate to proportions within mode of attendance, rather than proportions of total enrolments

Table 2

Enrolments[1] in level 3 provision in the FE sector by College and mode of attendance[2], 1995/96-1999/2000

		1995/96		1996/97		1997/98		1998/99		1999/00	
		No	%	No	%	No	%	No	%	No	%
BIFHE	Full-Time	512	11	688	15	759	17	1,169	29	1,492	37
	Part-Time	363	2	840	5	911	5	2,567	14	3,922	21
North West	Full-Time	903	37	868	35	932	38	1,023	43	959	38
	Part-Time	1,240	29	1,431	26	1,531	25	1,646	26	1,737	27
Fermanagh	Full-Time	414	41	489	45	638	60	546	58	511	53
	Part-Time	428	26	471	26	650	32	693	30	748	24
Limavady	Full-Time	430	56	474	56	395	48	580	62	569	62
	Part-Time	108	10	210	20	246	22	363	26	351	24
Omagh	Full-Time	548	64	573	62	556	61	475	61	523	59
	Part-Time	281	23	325	18	376	19	518	30	619	28
NIHCC	Full-Time	121	33	136	36	169	40	166	42	95	29
	Part-Time	37	30	71	44	63	28	52	33	31	15
Causeway	Full-Time	707	62	725	60	702	66	699	65	698	66
	Part-Time	384	18	285	13	262	13	314	17	284	16
North East	Full-Time	1,112	55	1,089	52	1,147	53	1,255	60	1,175	56
	Part-Time	1,049	26	832	20	702	19	924	24	942	22
East Antrim	Full-Time	585	53	602	53	664	58	731	68	560	57
	Part-Time	926	26	924	25	1,100	28	1,244	33	1,088	29
Lisburn	Full-Time	297	29	371	34	574	52	603	55	521	49
	Part-Time	386	14	421	16	340	15	549	23	713	28
Castlereagh	Full-Time	424	56	478	62	497	58	432	56	318	42
	Part-Time	470	21	546	21	530	22	653	26	720	27
North Down & Ards	Full-Time	801	43	778	41	874	44	1,112	54	1,017	48
	Part-Time	526	13	558	13	680	15	916	20	757	16
East Down	Full-Time	432	37	460	37	503	41	687	60	509	42
	Part-Time	269	10	353	12	320	13	624	23	342	12
Armagh	Full-Time	330	32	419	33	494	36	934	72	586	50
	Part-Time	84	12	70	12	62	10	173	28	139	16

		1995/96		1996/97		1997/98		1998/99		1999/00	
		No	%	No	%	No	%	No	%	No	%
East Tyrone	Full-Time	479	55	461	53	382	44	422	51	375	48
	Part-Time	297	17	258	14	359	18	510	27	274	12
Newry & Kilkeel	Full-Time	1,012	60	1,148	62	1,124	62	1,071	60	1,163	59
	Part-Time	613	20	592	18	583	16	1,039	27	872	24
Upper Bann	Full-Time	609	49	512	42	600	48	782	65	651	56
	Part-Time	449	11	530	12	451	11	706	16	1,045	25
All Colleges	Full-Time	9,716	41	10,271	41	11,010	44	12,687	53	11,722	49
	Part-Time	7,910	14	8,717	15	9,166	15	13,491	22	14,584	22

Source: FESR

[1]   figures relate to snapshots of enrolments at 1 November each academic year

[2]   percentages relate to proportions within mode of attendance, rather than proportions of total enrolments

APPENDIX

Armagh College of Further Education

Belfast Institute of Further and Higher Education

East Antrim Institute of Further and Higher Education

East Tyrone College of Further and Higher Education

Limavady College of Further and Higher Education

Lisburn Institute of Further and Higher Education

North East Institute of Further and Higher Education