

Q06/2000

Dentistry

1998 to 2000

Subject Overview Report Dentistry

Summary

The reviewers find the overall quality of higher education provision in dentistry in England and Northern Ireland to be excellent. All 12 providers visited are Quality Approved. Across the six aspects of provision by far the most frequently awarded grade was grade 4, the highest. This report outlines the main findings of the 12 reviews, highlighting best practice and indicating where improvement might be made. Of the providers, 11 are dental schools and one focuses on dental technology.

The aims and objectives of dentistry reflect the wide range of subjects and activities in both undergraduate and postgraduate curricula. As far as undergraduate programmes are concerned, the curriculum has been strongly driven by the General Dental Council (GDC) document, 'The First Five Years', published in 1997. This makes clear recommendations about curriculum aims and objectives and contains much informed discussion of subjects and topics in undergraduate dental education. The dental schools have taken this material to heart and, although the suggestions have been customised and interpreted in various ways by the different providers, there is a high degree of commonality about curriculum content. The report comments on related degree subjects, such as Dental Technology and the BMedSci (Biomedical Materials Science), which are technology and material science qualifications with particular relevance to dentistry. At taught masters level, there is a range of appropriate specialisms relevant to dental practices.

Overall, curricula and syllabi are consistent with the aims and objectives of the dental schools. It is the nature of dentistry courses to bring out many key transferable skills such as problem-solving, communication, presentation and teamwork. Other skills, such as information technology (IT) literacy, have been effectively built into curricula. There is strong evidence that both undergraduate and postgraduate students progress well, achieving good results. There is, however, a tendency to relatively high drop-out rates at the end of years one or two of undergraduate programmes, but thereafter, the completion rates for both undergraduates and postgraduates are 95 per cent or better. A major feature of the provision is the considerable amount of clinical practice involved at both undergraduate and postgraduate levels (some delivered through effective simulation methods). As might be expected with professionally orientated programmes of this kind, first-destination statistics are excellent with graduates

readily finding employment. Overall, employers indicated satisfaction with the courses on offer and the graduates of these courses.

Teaching and learning receives favourable comment, although there are some concerns about the consistency of assessment. In some instances, dental students are taught jointly with medical students for pre-clinical subjects. Students express broad satisfaction both with their learning experiences and the excellent academic and pastoral support they receive. Practical work in small groups develops good rapport between students and staff; both are familiar with the extensive support and careers advice provided by university central services. Similarly, library and IT resources are generally of a high quality and easily accessible. In general, the reviewers comment favourably on effective strategies for the maintenance and development of learning resources, though this is not confirmed in all cases. There is evidence of good co-operation between the universities and the National Health Service (NHS) authorities in planning for resources.

There is widespread evidence that student opinion is sought and makes an effective impact on quality enhancement, that committee structures capable of monitoring the achievement of course aims and objectives are in place and that GDC recommendations are taken seriously. However, the reviewers express concern about the informality of some of these processes and the lack of documentation stating that effective corrective actions have been taken. All institutions provide induction for new members of staff and some encourage them to take certificates or diplomas in teaching and learning.

Introduction

1. This Overview Report presents the findings of the review between 1998 and 2000 of the quality of higher education provided in dentistry by universities in England and Northern Ireland. The NHS and HEFCE jointly fund dentistry courses with the NHS providing rather more than 50 per cent of this funding. As a result, some staff are appointed by the local hospital trusts and some by the universities.

2. The Report covers these jointly funded courses. Other courses, paid for by practitioners or other agencies, are not within its scope. It has been derived from the Subject Review Reports of the 12 visits carried out, as listed in Annex A. The QAA and the GDC collaborated successfully over the arrangement of this programme of visits and agreed to share documentation, namely the self-assessment document for their visiting and scrutiny processes. The main purposes of the Report are to highlight both the positive features and areas for improvement, and to assist in the dissemination of best practice.

3. Dentistry is offered at bachelor degree level with the possibility of honours or distinction at 10 of the dental schools visited. These schools also offer the choice of an intercalated year, during which students may study for a BSc degree in subjects allied to dentistry, but generally the takeup is low. One provider offers only postgraduate qualifications. In one school there are opportunities for students with prior qualifications in allied subjects, such as hygiene, to take a university Diploma in Dental Therapy. Two schools offer a BMedSci degree for students wishing for an alternative to dentistry and one offers a materials science programme, BMedSci.

4. Exceptionally, one institution offers a range of programmes from a Certificate of Higher Education to BSc (Hons) in Dental Technology. These recruit from a wide range of students, including some with non-traditional entry qualifications and some with GNVQ.

5. Nine providers offer masters degrees covering a variety of named specialist topics, such as orthodontics, experimental oral medicine or dental materials science. Some schools also offer a MClintDent in such areas as paediatric dentistry, endodontics or periodontology. A prior qualification in dentistry is a requirement for all clinical masters degrees.

Aims and Objectives

6. University or school mission statements are explicitly mentioned by 50 per cent of the providers. These refer to such aims as: to attract high-calibre staff and students; to produce high-quality programmes informed by research and scholarship; and to produce self-critical undergraduates and postgraduates able to meet 'the nation's present and future needs' in respect of dental health and research.

7. The aims to provide a sound foundation for general professional practice, lifelong independent learning and a safe and caring service for patients are universally emphasised. Almost equally included are aims to develop the knowledge, skills and attitudes needed by dental practitioners who will be able to make effective contributions to the health of the community now and in the future. The notable exceptions are intercalated BSc degrees, allowing students to gain a degree in another science and two BMedSci degrees, which aim to give dental students alternative qualifications. There is also a BMedSci, which aims to provide a specialised materials science programme. The aim of the programmes in dental technology is to provide a suitable foundation for employment in dental technology occupations through wide access to courses offered in a variety of modes.

8. Taught masters degrees aim to provide opportunities for postgraduates to become involved in research and to enhance their knowledge, understanding and clinical skills in various areas of their chosen specialism.

9. In well over 90 per cent of examples, both undergraduate and postgraduate objectives (expressed as learning outcomes) are clearly stated. At undergraduate level, the most frequent are that students will have acquired sufficient knowledge, specialist skills, commitment to continuing self-development and professional attitudes to practise as unsupervised dentists. The ability to understand and apply current knowledge of allied sciences, including behavioural sciences, are emphasised, as are competence in legal, ethical, social, general health care and management matters. A wide range of transferable skills are mentioned, focusing in particular on investigative, analytical, problem-solving, planning, communication, presentation and team skills.

10. At postgraduate level, the students are expected to attain such learning outcomes as enhanced understanding of the chosen specialism, enhanced diagnostic and clinical skills, and increased ability to be a self-appraising, critical thinker. All require involvement in and understanding of current research methods and the production of a successful research project.

Curriculum Design, Content and Organisation

11. Of the 12 institutions visited, 92 per cent were awarded grade 4 in this aspect and 8 per cent grade 3.

12. The BDS and BChD dental courses are subject to approval by the GDC and the guidelines outlined in 'The First Five Years' provide the basis for their structure and content. The GDC defines the aim of a clinical dental course 'to produce a caring, knowledgeable, competent and skilful dentist who is able to accept professional responsibility for the care of patients, who appreciates the need for continuing professional development, and who is able to utilise advances in relevant knowledge'. The reviewers find that this aspect in each institution is consistent with the aim of the GDC. Notwithstanding the requirements of the GDC, there is some variety in the design of the curricula among the different providers.

13. The five-year undergraduate dental course consists essentially of pre-clinical academic study followed by clinical study. However, the reviewers welcome the integration of these two main components, in particular the introduction of clinical subjects into the pre-clinical phase, observed in all institutions. The pre-clinical subjects are taught mainly by other departments and in three reports it is noted that dental students are taught together with medical students. In one of these, it is stated that the course is driven largely by the needs of the medical students and in another that there had been a consequential reduction in the oral biology content.

14. There is prominent emphasis upon transferable and communication skills. Students are introduced to IT skills early in the courses and are encouraged and have opportunities to practice these subsequently. For example, elective schemes, which are a requirement in all but one institution, provide opportunities to demonstrate such skills with the analysis of research data and the presentation of reports. Longitudinal courses in behavioural sciences are designed to develop communication skills, which are widely practised and honed in the clinical teaching.

15. The reviewers find the dental courses to be well designed, progressive and coherent. Clinical skills, based on scientific knowledge, are taught initially by specialist departments, with increasing emphasis upon whole patient care as students gain in knowledge and experience. In the final year, all institutions provide experience of simulated general dental practice. Providers make significant use of general dental practitioners as part-time teachers. This facilitates the transition into dental practice. Dental hygienists and, in two institutions, dental therapists are also taught,

although in one institution it is reported that dental students do not gain experience by working with them. Many institutions provide the opportunity for taking an intercalated BSc degree in a medical science. In one institution, the number of students taking up this option is particularly commended by the reviewers, but generally the take up is low in most institutions.

16. The reviewers find that the courses are under continuous review and change according to the needs of modern dentistry and are conducted in an environment that encourages critical analysis and the research ethic. The student body has the opportunity to, and is actively engaged in, influencing the course content and organisation.

17. The one interdisciplinary BMedSci course in Biomedical Materials Science is well designed and covers a range of scientific, biological and medical topics relevant to the development and application of synthetic materials for biomedical applications. The courses in dental technology offered by the one university have a logical progression from basic science to units which cover the full range of topics in modern dental technology, including dental and biomaterials science, and these make a full contribution to the learning objectives.

18. Nine dental schools offer postgraduate masters courses, mostly based upon the recognised clinical dental specialisms. Apart from the one purely postgraduate institution, most other providers offer only a relatively small range of postgraduate courses. They provide advanced study of the chosen subject and mostly have three components: theoretical, clinical and a research project with dissertation. The theoretical components are increasingly module-based, allowing more interdisciplinary study and greater student choice. The reviewers found that the masters courses had currency and were of relevance to specialist dental practice. The MSc courses in orthodontics are subject to the requirements for specialist training as laid down by the Specialist Advisory Committee in Orthodontics.

Teaching, Learning and Assessment

19. In this aspect 42 per cent of providers were awarded grade 4 and the remaining 58 per cent grade 3.

20. All institutions have strategies in place to ensure effective delivery of the curriculum and which articulate well with expected learning outcomes. These strategies include a range of teaching and learning methods from the traditional lecture and clinical supervision, to seminars, group and project work. The use of computer-aided learning (CAL) packages is particularly noted in relation to

four providers (33 per cent), at least one of which offers material on loan for students to use outside the institution. Problem-based learning has been introduced as part of the course in two institutions (17 per cent) and markedly impressed the reviewers in one. All institutions make reference to self-directed learning as a part of their courses, although the time available varies between courses.

21. Other learning methods, which draw favourable comment from the reviewers in individual institutions include discussion groups, role play, the availability of lecture notes and other material by electronic means, special study topics and the attachment of dental undergraduates to family medical practitioners and specific patient families.

22. The quality of observed teaching was almost universally good, with sessions displaying clear objectives and good organisation, led by enthusiastic, well-informed staff. These staff made effective use of resources and elicited enthusiastic student participation. Issues such as poor delivery of courses in human disease (three cases), dissatisfaction of students with a number of courses (one case) and poor student attendance at lectures (one case) only rarely marred this high quality.

23. No adverse comment was made concerning student workload, although one report noted that the course was particularly challenging for the students.

24. Assessment in all the providers includes a variety of methods, with essays, short answer, multiple-choice question papers and project work being used in most. There are also examples of innovative assessment. The Objective Structured Clinical Examination is mentioned specifically in relation to six providers. This type of examination involves candidates progressing around stations of clinical exercises or simulations and the use of highly specific marking schemes. The progression of skill development is also assessed in clinics. In at least one school, this is by tests involving detailed marking of specific procedures (Structured Clinical Operative Tests). One report commends an institution's use of students' own records for informing term-end progress interviews. The use of logbooks to aid self-assessment and recording of student progress are specifically noted in three reports. Three schools (25 per cent) have introduced a formal contribution of in-course assessment to degree examinations. Student understanding of the assessment criteria and methods is regarded as satisfactory by the reviewers in all institutions, but it is suggested that two providers seek ways to improve on this.

25. The reviewers express concern about the consistency of assessment scales (including self-assessment), the rigour with which they are applied, the availability of marking schemes and of model answers,

and the robust application of double and anonymous-marking. One or more of these are noted in eight cases (67 per cent). In addition, in one example, comment is made that undue reliance is placed on knowledge recall, with insufficient testing of analytical skill.

26. The reviewers report the best examples of feedback to students to be comprehensive, informative and timely. However, some concern is expressed that in two institutions either the extent or the punctuality of the feedback to students could be improved.

27. The dental technology provision visited differs from others in its emphasis on practical sessions and work placements. The wide use of purpose-made video and computing facilities is commended by the reviewers as an example of good practice.

Student Progression and Achievement

28. In this aspect, 92 per cent of providers were awarded grade 4 and the remainder grade 3.

29. The ratio of applicants to places is high for the dental undergraduate programmes, ranging from 7:1 to 16:1 for most institutions, although the ratio is lower in Northern Ireland (4:1). Ratios for postgraduate courses are between 4:1 and 5:1 for most schools including the specialist postgraduate institute. Applications for the dental technology course, the dental materials course and the dental therapists courses are around 2:1.

30. Entry qualifications for dental undergraduate courses are very similar, as admissions tutors meet annually to discuss these. Currently the GCE A-Level requirement is normally ABB (26 points), although one school asks for AAB (28 points) and another asks for AAA (30 points). Postgraduate courses all require applicants to have a dental qualification and postgraduate clinical experience. The dental technology course accepts GCE A-Levels and GNVQ achievements; the mean GCE A-Level points score of entrants is 12. The dental materials science course students have a mean GCE A-Level score of 21.5 points.

31. The majority of entrants to undergraduate courses are school leavers, although all schools admit a few mature students, usually with a first degree in another subject. The ratio of males to females has a slight bias towards females. The Diploma course for Dental Therapists requires a prior qualification in dental hygiene and has an entirely female intake. Postgraduate courses have a preponderance of males in most institutions; in contrast, the postgraduate institute has a balanced gender intake for its postgraduate students.

32. Ethnic minorities are well represented in most dental schools, up to 66 per cent of students in some schools. Several schools admit quotas (around

10 per cent) of overseas students. Postgraduate students include a mix of ethnic and overseas origins; for example, Greek, Arab and Malaysian. There are few students with defined disabilities as the practical and clinical aspects of dentistry can present difficulties to such students.

33. Dentistry, like medicine, differs from most university degree courses in having a series of degree examinations, monitored by external examiners, throughout the course and students are not permitted to proceed until each examination is passed. This results in relatively high drop-out rates by the end of the first year or second year (between 13 to 18 per cent across several schools). Actual wastage rates vary because of different policies over permitting students up to three attempts at an examination. After the first two years failure rates are very low and around 95 per cent of students entering year three complete their courses satisfactorily and qualify to practise dentistry. Some 5 to 10 per cent of students are awarded a degree with honours. As stated, most schools offer students the possibility of studying for intercalated degrees in basic science subjects, but few students take up this option. Very few students transfer out of dental courses and the possibilities of transferring in are very limited. In other undergraduate programmes, the dental technology course has high wastage in the early years and has revised admission procedures to try to address this problem. There is some wastage in all years of the BMedSci (Biomedical Materials) course. Progression rates in the dental therapists' course are excellent. Postgraduate courses have high rates of achievement and 95 per cent of students complete their courses in the designated time.

34. The reviewers comment very favourably upon the quality of the student work sampled in each institution and this agrees with the views of the external examiners. There was evidence in the work of knowledge and understanding, of practical and clinical skills, and of key transferable skills gained by the students.

35. The student intake quotas for dental schools, based upon perceived needs, are set nationally and all dentists qualifying progress to suitable employment. In the majority of cases, employers (usually vocational trainers) of graduating dentists are full of praise for their skills and attitudes. Some reservations are expressed by the reviewers about the adequacy of training of graduates from one school in one aspect of dentistry. In dental technology, the situation is little different with recruitment targets set rather than quotas. Some 75 per cent of the technology graduates obtain employment on qualification. The employers of these graduates in dental technology were appreciative of their skills and attitudes. Dental therapists have no

problem in obtaining suitable employment and a high proportion of BMedSci (Biomedical Materials) graduates readily find appropriate employment.

Student Support and Guidance

36. In all institutions this aspect made a full contribution to the stated objectives. The reviewers are impressed by the general strategy for support and guidance of the undergraduate and postgraduate students, which is consistent with the student profiles and aims and objectives of all institutions. Without exception, the student opinion stated great satisfaction with the support and guidance provided. The reviewers confirm this view.

37. In three reports, there is reference to the provision of summer schools for potential dental students. Prospective home students are interviewed, prior to being offered a place. Panel members receive training in interview techniques and the interviews are broadly structured. Institutional prospectuses are consistently attractive and informative. All students attend an induction course, which for the undergraduates is centrally organised with significant input from the dental schools. Some providers make special arrangements for overseas students to assist their introduction to university life in a foreign country.

38. The main structured support for students is through the individual tutorial scheme. However, as dentistry students require close supervision during the treatment of patients, many students develop working relationships with other members of staff from whom they receive help and guidance. There is variation in the tutorial schemes although the reviewers find all to be effective. Personal tutors are appointed to students in their first year. In some institutions, a personal tutor and student may remain together throughout the course; in others, largely because of geographical considerations with campuses some distance apart, the tutors' responsible for the pre-clinical phase of the course are different from those acting during the clinical phase. In a number of institutions, the personal tutor deals with both academic and pastoral matters, whereas in others there are separate academic tutors from the subject teachers. Most tutorial schemes are pro-active. In one institution where this is not the case, the reviewers note that care should be taken to ensure that less confident students needing advice are not overlooked. Informative course handbooks are provided in all institutions.

39. Student performance in the clinical parts of the course is recorded in logbooks or their equivalent and in all parts is formally reviewed on a regular basis and

progress discussed with the student. Where necessary, for example, additional guidance or instruction is provided for students who are progressing unsatisfactorily or who have failed formal examinations. The reviewers found strong evidence for the success of the schemes, from the very high progression rates of 95 per cent or better for the undergraduate dental students following the first two years of the course, and of postgraduate students. It is in the first two years that the progression rates are less satisfactory in some cases.

40. In five institutions, there are arrangements variously described as 'mentoring', 'parenting' or 'buddy' schemes in which senior students aid first-year students. These arrangements are of particular value in those institutions using problem-based learning and are commended by the reviewers. Within the one postgraduate institution, there is a high level of peer support.

41. All the institutions provide good and comprehensive services centrally to deal with pastoral matters that cannot be competently handled by the personal tutors. The reviewers find that both staff and students are aware of the wider facilities available and how access to them might be gained. In three reports, there is reference to the good tutorial arrangements made for students on overseas placements.

42. The careers guidance available to dental undergraduates is effective, although there is variation between institutions. As most graduates are destined to enter general dental practice, much guidance is obtained from part-time staff members, themselves occupied predominantly in NHS work. Other sources of information are provided by careers symposia, job-shop sessions, and contact with staff involved with vocational training schemes and practice visits. Again, in the dental technology courses informative careers guidance is provided predominantly within the department concerned.

Learning Resources

43. In 92 per cent of institutions, learning resources were awarded grade 4 and in the others, grade 3.

44. An appropriate strategy for managing learning resources is identified in most reports, with evidence for a rolling programme of equipment replacement in six schools (50 per cent). The other reports do not confirm or otherwise this situation. There is some evidence of good co-operation between universities and NHS authorities in planning new and replacement provision.

45. Library services are generally excellent. There is a collection of books, periodicals, audiovisual and electronic learning materials to be found that is at least

adequate and, in most providers, comprehensive.

For some schools provision is made through joint health services libraries and for some there are separate dental collections. Three reports highly commend joint provision of library and IT services. All schools offer access to general university collections. Library opening hours vary considerably, with two schools offering five-day access to the dental collections and five offering seven-day access, including one with 24 hour access. One report expresses reservations about the limited vacation and weekend library access. Many reports make favourable comment on student induction programmes and supportive staff. Representation by students on library committees and cross-representation of library staff on school committees is noted in several reports, although this good practice is not uniform.

46. Problem-based learning resources are highly utilised at one institution and, at another, there is an excellent evaluation scheme run by library staff. Concerns are expressed about one provider where the availability of dental books and journals in the host library is limited and that the short-loan collection is inadequate, despite student access to the wider university library at a more distant site.

47. Extensive use of IT is reported in all schools. Access to computers is regarded as adequate overall, and in most provision there is ready access to a university-wide computer provision. Three reports note the widespread use of electronic mail in courses. The IT is generally well supported by helpful staff, often providing dedicated induction courses. A wide range of relevant materials is available. Many institutions make extensive use of CAL programmes, often including extensive material produced in-house.

48. Lecture and small-group teaching rooms are satisfactory in all provisions with an appropriate range of audiovisual equipment. The reviewers report that clinical equipment is currently of a satisfactory quality in general and well maintained. Where, in a very few cases, the equipment is becoming dated, some arrangements are in place for replacement. Two reports pass comments on a plentiful supply of patients for the clinical work. Facilities provided at other hospitals and outreach clinics are also noted as a valuable resource to student learning. Several examples denote extremely well-equipped laboratories for practising dental and medical, clinical, anatomical and technical skills. As examples of best practice, these include a human anatomy resource centre, clinical skills laboratories, and closed-circuit television and computer-equipped dental technology teaching laboratories.

49. Three reports (25 per cent) note weakness in staff numbers for nursing or administrative support for clinical teaching, reducing the capacity for students to develop team skills by working with dental nurses. Notably, other reports do not pass comment on the adequacy or otherwise of such support staffing. Technical and laboratory support is satisfactory where comment is made, and excellent staff-student relationships are noted. Social and recreational facilities for the students are adequate in all provision.

Quality Management and Enhancement

50. This aspect is the most variable of the six. Grade 4 was awarded to 58 per cent of institutions, grade 3 to 25 per cent, and grade 2 to 17 per cent.

51. All the institutions visited have committee structures in place capable of monitoring and evaluating the extent to which aims and objectives are being met. The number of committees, their subcommittee structure and the remit and reporting lines, vary between dental schools.

52. In two-thirds of the institutions, there is annual course review. At the postgraduate institute, this includes external assessment. The dental technology course operates to a university annual quality action plan.

53. Mechanisms exist in all schools for comments from staff, students and external examiners to be fed to committees responsible for the courses, although the reviewers report on the lack of formal minuting of matters requiring action, of recommendations for action, and of the results of such action in some cases. In at least one school, comment is made about the poor attendance at course committees. It is clear that all schools respond to student concerns in a formal way, but matters are sometimes dealt with informally and not recorded. In one instance and due to pressure on time, informality meant discussion with the Dean at lunchtime. In contrast, all courses use annual student questionnaires in order to elicit comment from the students.

54. In almost half of the schools, the reviewers express concern over the apparent lack of response to matters raised by external examiners and the failure in two instances of schools to obtain reports from all external examiners.

55. Recommendations resulting from visitations of the GDC are always taken seriously. Several schools have input from previous graduates and vocational trainers to their course committees.

56. Induction courses and mentoring schemes for new members of staff are available in all institutions, although the reviewers commented that mentors in one institution did not receive training for the role. Staff appraisal operates in eight schools but is currently suspended in one. Peer review of teaching is carried out in 10 institutions, although it is limited to a small number of staff in three of these. Furthermore, peer review is not always linked either to the appraisal system or to staff development.

57. Continuing staff development is available in all institutions. This varies from voluntary attendance at centrally arranged courses to special away days organised for dental school staff. The latter tend to be more focused and better attended than university-arranged courses. There was evidence in several institutions that both new and existing staff are encouraged to attend courses leading to certificates or diplomas in teaching and learning in higher education and professional recognition by the Institute of Learning and Teaching.

Conclusions

58. High grades were awarded across the provision. student support and guidance achieved 100 per cent grade 4 and curriculum design, content and organisation, student progression and achievement and learning resources all achieved 92 per cent grade 4. The exceptions are teaching, learning and assessment, which achieved 42 per cent grade 4 and 58 per cent grade 3 and quality management and enhancement, which achieved 58 per cent grade 4, 25 per cent grade 3 and 17 per cent grade 2. The problems in teaching, learning and assessment are mainly concerned with weaknesses in assessment procedures, while in quality management and enhancement there is scope for improvement (in two cases, considerable improvement) in the documentation and practice of course monitoring. Overall, however, there is clear evidence that, in dentistry, high-quality courses are delivered to enthusiastic and committed students by enthusiastic and committed staff.

59. Dentistry is offered in 12 universities in England and Northern Ireland, one of which provides only postgraduate courses. Provision is limited as target entry numbers are indicated by HEFCE with the NHS and HEFCE jointly providing funding. The dental technology course actively encourages wide entry; the dental schools seek recruits from very well qualified GCE A-Level students. Programmes at both undergraduate and postgraduate level are tightly focused on specific vocational aims. In the

process, students acquire a wide range of academic and professional skills and competences, which admirably prepare them to be safe, caring and competent practitioners in the community at large.

60. Other key features of the provision include the following:

- a. Curricula fulfil General Dental Council requirements for dental undergraduate courses and provide postgraduates with a wide range of appropriate, specialist choices. These programmes are up to date and underpinned by staff research, scholarship and professional experience.
- b. Students enjoy generally lively, challenging, and sometimes innovative, teaching and learning experiences. However, there is some scope for improvement in the consistency of assessment processes, the rigour with which they are applied and the robust application of anonymous marking.
- c. Overall, students are well qualified, with a mean average GCE A-Level score of 26 points. The gender balance is fairly even at undergraduate level whereas there is generally a male preponderance at postgraduate level. Some schools have up to 66 per cent ethnic minorities. After a relatively high dropout rate in the first two years of an undergraduate programme, students progress well and achieve good qualifications at both undergraduate and postgraduate levels. The reviewers confirm the opinion of external examiners that the standard of work is of a high quality.
- d. In line with aims and objectives and the highly vocational focus of the provision, first-destination statistics are excellent and employers, with one exception, speak highly of the competence of graduates in dentistry.
- e. The reviewers comment very favourably about the quality of student support and the way their progress is monitored. Small-group work leads to excellent rapport between staff and students and, with some variation between providers, academic and pastoral support is effective. There is also good communication between staff and students in dentistry and central services. Careers departments are generally pro-active, and students are well informed about other central support services, which they can access easily when required.
- f. Learning resources are generally satisfactory, with some being excellent. There are good strategies for the maintenance and development of learning resources and some 50 per cent of providers have rolling programmes for replacement of materials and

equipment. This is not noted in other providers.

The library and IT provision are of a high quality and are well used and teaching accommodation is at least satisfactory. Some practical teaching and learning facilities are highlighted by the reviewers as examples of best practice such as clinical skills laboratories, the human anatomy resource centre and the dental technology teaching laboratory.

- g. All institutions have committee structures potentially capable of effectively monitoring the achievement of their course aims and objectives and the maintenance of quality. However, with some exceptions the documentation of corrective actions taken leaves scope, and, in two examples considerable scope for improvement.
- h. All institutions take staff development seriously. Induction courses and mentors are provided for new staff and in some institutions staff are encouraged to take a certificate or diploma in teaching and learning. Some 66 per cent have staff appraisal systems and over 90 per cent carry out peer-review of teaching. Unfortunately, these two activities are rarely co-ordinated. The most successful staff-development activities for academic staff are school-organised and carried out on staff away days.

Graded Profile

The graded profile indicates the extent to which the student learning experience and achievement demonstrate that the aims and objectives set by the subject provider are being met. The tests and the criteria applied by the reviewers are these:

Aspects of provision

1. Curriculum Design, Content and Organisation
2. Teaching, Learning and Assessment
3. Student Progression and Achievement
4. Student Support and Guidance
5. Learning Resources
6. Quality Management and Enhancement.

Tests to be applied

To what extent do the student learning experience and student achievement, within this aspect of provision, contribute to meeting the objectives set by the subject provider?

Do the objectives set, and the level of attainment of those objectives, allow the aims set by the subject provider to be met?

Scale points

1

The aims and/or objectives set by the subject provider are not met; there are major shortcomings that must be rectified.

2

This aspect makes an acceptable contribution to the attainment of the stated objectives, but significant improvement could be made.

The aims set by the subject provider are broadly met.

3

This aspect makes a substantial contribution to the attainment of the stated objectives; however, there is scope for improvement.

The aims set by the subject provider are substantially met.

4

This aspect makes a full contribution to the attainment of the stated objectives.

The aims set by the subject provider are met.

Annex A

Institutions Reviewed in Dentistry

Institution	Curriculum Design, Content and Organisation	Teaching, Learning and Assessment	Student Progression and Achievement	Student Support and Guidance	Learning Resources	Quality Management and Enhancement	Assessment Outcome	Quality Assessment Report
King's College London	4	4	4	4	4	4	Quality Approved	Q172/2000
Queen Mary and Westfield College	4	4	4	4	4	4	Quality Approved	Q252/2000
The Manchester Metropolitan University	4	3	4	4	3	3	Quality Approved	Q69/2000
The Queen's University of Belfast	4	4	4	4	4	4	Quality Approved	Q4/99
University College London	4	3	4	4	4	4	Quality Approved	Q218/99
University of Birmingham	4	3	4	4	4	3	Quality Approved	Q58/99
University of Bristol	3	3	3	4	4	2	Quality Approved	Q44/2000
University of Leeds	4	4	4	4	4	3	Quality Approved	Q112/99
University of Liverpool	4	3	4	4	4	2	Quality Approved	Q113/99
University of Manchester	4	4	4	4	4	4	Quality Approved	Q127/2000
University of Newcastle upon Tyne	4	3	4	4	4	4	Quality Approved	Q25/99
University of Sheffield	4	3	4	4	4	4	Quality Approved	Q284/2000

Annex B

Contract Reviewers

ADSHEAD Mr David
ASHWORTH Professor Allan
BARKHAM Dr John
BAYLIS Professor (Emeritus) Terence
BUTEL Mr Jeffery H
CLARKE Mr Peter
DOHERTY Professor (Emeritus)
HARDING Mr Tony
KAY Dr Susan E
LEWIS Mr David
MARSHALL Mrs Helen
NISBETT Mr Alan
SCHOFIELD Dr Robert

Subject Specialists

BADER Professor Michael G
BEAN Mr Martin J
BEELEY Dr Josie A
BROADFOOT Mr Robert
BROWNE Professor (Emeritus) Roger
FANIBUNDA Mr Kersi
FERGUSON Dr David B
GLENWRIGHT Mr H Donald
GRIFFITHS Mr Trevor T
HARDIE Professor Jeremy M
HOLMES Professor Michael C
LAIRD Professor W Ronald E
LESTER Mr David W
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MACKIE Dr Iain C
MARTIN Mr D Muir
McCABE Professor John F
McGIMPSEY Professor John G
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WALSH Professor Trevor F
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