

TRINITY COLLEGE DUBLIN



PROVOST'S REPORT TO COUNCIL ON THE REVIEW OF THE SCHOOL OF DENTAL SCIENCE

1. INTRODUCTION

This report presents the outcome of a review of the School of Dental Science. An external peer review visitation was undertaken from the 25th-27th February 2009 by Professor Martin Addy, University of Bristol, Professor Bruno Loos, Academic Centre for Dentistry Amsterdam (ACTA), and Professor Heikki Murtomaa University of Helsinki. The internal facilitator was Professor John Parnell, School of Natural Sciences, Trinity College Dublin.

The report is based on (i) feedback from the External Reviewers received on the 4th May 2009, (ii) a submission from the School of Dental Science received on the 14th May 2009, and (iii) a submission from the Dean of Health Sciences received on the 28th May 2009.

The main purpose of the School review is (a) to provide a structured opportunity for the School to reflect on its activities and plans for development while benefiting from a constructive commentary by senior colleagues external to College; (b) to ensure that quality and standards in teaching, research and administration are being maintained and enhanced and that areas of concern in this regard are identified and addressed. Each School in College is reviewed systematically once every seven years.

2. OVERVIEW OF THE SCHOOL

2.1 Aims and Objectives of the School

The Dublin Dental School and Hospital states as its mission that it aims to be a centre of excellence in patient care, education and research, which enhances both the learning experience of its students and the delivery of care to patients, in an integrated and balanced way. This is achieved in a safe environment by the effective use of the available resources and in response to the needs of the community through governance, partnership, investment in its staff, valuing diversity and the integration of technology.

2.2 Programmes to which the School provides teaching

Undergraduate:

- Bachelor in Dental Science (B. Dent. Sc.)
- Bachelor in Dental Technology (B. Dent. Tech.)
- Diploma in Dental Nursing
- Diploma in Dental Hygiene

Postgraduate:

- Professional Doctorate in Dental Science (B. Ch. Dent.)
- Postgraduate Diploma in Clinical Dentistry
- Postgraduate Diploma in Conscious Sedation in Dentistry

2.3 Research

The core research activities are summarised under the following headings:

- Dental Education
- Basic Sciences (including Materials Science, Bioengineering, Molecular Biology and Microbiology)

- Clinical Science (including Implantology, Periodontology, Restorative Dentistry, Oral Medicine, Oral Pathology, Oral Surgery, Paediatric Dentistry and Orthodontics)
- Oral Health Services (Public Dental Health and Special Needs and Special Care Dentistry).

2.4 Summary Statistical Profile of the School for the Academic Year 2007/08¹

Full-time Staff FTE	Undergraduate FTE	Postgraduate (Research) FTE	School Staff: Student Ratio	Faculty Staff: Student Ratio
29.7	234	41	9	15

Figures from Senior Lecturer's Annual Report approved by Council at its meeting on 14th January 2009

2.5 Accommodation and Facilities (Physical Resources)

The Dublin Dental Hospital consists of approximately 4,500 sq m spread over five floors. It consists of a new building constructed in 1998 which was merged with older buildings dating back to 1899 to create a single site, patient-focused, teaching and research facility. The older Victorian buildings were totally refurbished in 1997/8 to create a modern and award winning environment, and are now categorised as a 'List One' protected structure by the Dublin City Council.

The building is notable for the highly efficient use of space both clinical and office. One example being that all clinical spaces are multi-user and as a result may be used by staff or students from any discipline on any session. Another example is that meeting space, such as the Boardroom, is used for Problem Based Learning (PBL) sessions on one morning per week.

In 2006, the Hospital completed the purchase of the upper floors of the adjacent buildings in Lincoln Place from Trinity College. This facility, also a "List One" structure, will eventually provide the School with an additional 1,300 sq m which will have direct lateral access to the hospital and teaching facilities. To date the roof and external fabric of these buildings have been restored and plans have been produced by the architects for an additional floor at the back of these buildings. The internal project team has identified accommodation for academic/teaching staff, seminar space, a library extension and teaching areas as high priorities for future space allocation in these new areas. Construction work is scheduled to commence in mid 2009.

3. EXTERNAL PEER REVIEW REPORT

SUMMARY OF REPORT

The Reviewers report that the Dublin Dental Hospital is, overall, "an excellent educational facility and the School of Dental Science has a modern undergraduate dental curriculum." They report that the "dental research programs at the Dental School are addressing appropriate topics, they have a link with the dental field and they are recognized within their respective peer groups. Overall the review committee felt that all senior staff have a strong scientific interest and are aware of the need for the school to excel in research. The staff members share positive attitudes and appreciation of support by the Dental Hospital to facilitate their research activities." The Reviewers note, however, there is still room for further increase in the output of quality papers and PhD theses," and report the need for "internal collaboration beyond the dental school within Trinity College."

3.1 RESEARCH

The Reviewers report that the wide range of research programmes underway in the School are addressing appropriate topics, are linked to the dental field and are recognised within their respective peer groups. They note improved research output by the four main research groups (Bioscience, Oral Surgery and Medicine, Dental

¹ The staff FTEs include all Professors, Associate Professors, Senior Lecturer, Lecturers and all part-time and occasional staff and demonstrators, converted to an FTE, who are funded by the Dublin Dental Hospital Board. No staff are funded by the HEA core grant.

Materials and Periodontology) in the period 2004-2008 compared to 2000-2004 and also note that collaborations are on-going both between these groups and with international partners. The nature and extent of internal collaboration between other research groups/individual researchers (with the exception of Biosciences) is, however, unclear to the Reviewers and they feel that collaboration beyond the school within Trinity *“was not well explored.”*

The Reviewers report that while the research aims and focus of the four main groups are strong, the three other groups *“appeared less objective in their research aspirations.”* They express concern regarding the research output from the Division of Child Dental Health and suggest that *“a re-appraisal of the research topics and collaborations within the university, or within institutes nationally and internationally may increase the chance for external funding of significant research proposals.”* They suggest that *“the Director of Research could assume a better role in taking responsibility for constant attention to the focus of research in the school, for documenting yearly research accomplishments, for tabulating in line with the university broad accepted Key Performance Indicators (KPIs) and for redirecting resources to the best performing research groups.”*

The Reviewers are encouraged to see an increase in the numbers of students graduating with a PhD and report that *“the current PhD students are without exception very happy with their work, progress of projects, research facilities and access to and mentoring by their respective supervisors.”* With regard to the M.Ch.Dent. programmes, the Reviewers note improvements in recent years to the structure of the programmes and commend the requirement for students to publish a paper in a peer-reviewed journal as part of their research project, which they feel *“will add substantially to the output of the School.”* While the research output from the School has improved over the last five years, the Reviewers feel that *“there is still some room for further increase in output of quality papers and PhD theses”* and that *“it is not acceptable that no research papers are published from a PhD thesis.”* In this regard, the Reviewers feel that *“some professors who are tasked with the role of research leaders in the School, are somewhat underperforming”* with only a few having *“a robust constant output.”* They note, however, that *“2008 was a solid year”* possibly indicating an upswing in research efforts.

The Reviewers report that the six professional doctorate programmes all conform to the appropriate European and /or American guidelines for specialisation. They note that *“the possibility of a professional doctorate programme in Endodontics following the recent appointment of a Senior Lecturer/consultant in that discipline is under consideration.”* Although the programmes have only recently been changed from masters to doctorates, the Reviewers feel that each one is well thought out and successful, and report that *“staff and students alike were most enthusiastic about the programmes.”* Students feel that they have appropriate exposure to clinical material, and good laboratory and nursing support. For the disciplines of Prosthetics, Oral Surgery and Periodontology, there appear to be no conflicts of interest over aspects of related patient care, notably Implantology. The Reviewers feel that it is too early to determine whether the aim of publishing at least one paper from the dissertation has been consistently achieved. They report that a consistent complaint from students relates to concerns about the appropriateness of the core course.

3.2 TEACHING & LEARNING

3.2.1 Bachelor in Dental Science

The Reviewers report that the Dublin Dental Hospital is, overall, an excellent educational facility and the School of Dental Science has a modern undergraduate dental curriculum. The extremely high entry requirements to the School guarantee *“very intelligent and industrious students”* and the reviewers noted that the *“very high standard of the School’s graduates”* have remained since the changeover in the 1990s from the traditional didactic approach to PBL. They feel that PBL is well integrated within the whole undergraduate programme and discussions with students confirm *“their very positive feelings about their dental education, the clinical training and the dedication of their teachers.”* With regard to the shift in funding of the preclinical subjects from the University to the Dental Hospital, the Reviewers report that the main advantage to this has been the evolution of preclinical teaching programmes of specific relevance to dental students. They speculate that the upcoming introduction of semesterisation *“may cause some logistical and timetabling problems for the School”* but report feel that these are surmountable.

While it is clear to the Reviewers that the ethos of clinical teaching in the School is based on a holistic approach to patient care, in application they found that the *“claimed team approach”* (student dentists, nurses, hygienists

and technicians) does not actually occur until the final year of the course. The Reviewers report that the School and the Hospital provide excellent practical education and training for students whilst also taking account of patients and patient services. Students have good case mixes including *“at least one implant, minor oral and periodontal surgery cases not customarily available for undergraduates in many European dental schools.”* However, they also report concerns from students that there was no formal training in tooth extraction. Preventative Dentistry features strongly throughout the course and in Restorative Dentistry *“support from the Hospital’s dental technicians was reported to be very good.”* While the appointment of a Senior Lecturer/Consultant in Endodontics has removed one of the few weaknesses in the clinical teaching staff expertise, the Reviewers feel that there is a need for an oral radiologist. This high staff student contact time is deemed by the Reviewers to be important for high quality training *“due to the unique nature of dental education and training.”*

The Reviewers were unclear as to how much experience and training in research appreciation, methodology and practice the undergraduate students receive and suggest that the presentations for the literature-based dissertations *“might better utilise the examination/defence opportunities and experience for students.”* They note that *“very few of the research dissertations are published..., the opportunity to conduct research projects is limited and there is no formalised elective period.”* Nevertheless, the Reviewers report that students feel they have sufficient exposure to research. The Reviewers note that while student exchanges are possible, the places available are limited, do not appear formalised or instructed and for some student cohorts, do not occur at all.

With regard to student assessment methods, the Reviewers were satisfied that the methods used were appropriate and reported a wish amongst students for *“more experience in case presentation to better prepare them for the seen and unseen patient aspects of the final examination.”* The success rate for final exams is high and the Reviewers report that repeat examinations are uncommon, as are deferrals. Although the proportion of first class honours degrees is low relative to other university departments, the Reviewers suggest that *“this can almost certainly be explained by the regulations in place at many Dental Schools in the British Isles for the award of honors.”*

3.2.2 Diploma in Dental Nursing

With regard to the two-year full-time diploma course, the Reviewers report that students were very happy with the course overall and enjoyed the formalised placements in practices (5 weeks) and community centres (two weeks). However, diploma students have little or no interaction with dental students or hygienists and even when allocated to dental students they reported *“standing around and just observing.”* The Reviewers feel that the programme is very comprehensive, incorporates interesting projects and uses appropriate and varied assessment methods.

The part-time diploma in Dental Nursing was initiated in 2004 in response to the possibility that dental nurses would be obliged to register with the Dental Council of Ireland. The Reviewers report that students on the course *“were very enthusiastic and positive about the course and their teachers”* and are taught by a small number of very dedicated and enthusiastic teachers using an impressive, user friendly and interactive modular E-learning system.

3.2.3 Dental Technology Degree

The Reviewers have *“significant concerns about the viability”* of the Dental Technology degree programme within the Dental School. They feel that the small number of students means that the teaching must be inefficient, with the limited laboratory accommodation precluding any immediate increase in numbers. Although students are happy with the programme, the Reviewers note that *“timetabling was at times uncoordinated if not chaotic.”* Integration with the dental science students *“appeared therefore to be very limited and there was no feel for the students playing a role in the Dental Team.”* The Reviewers report that *“the 3rd year external placements for the students in production laboratories has proved difficult”* and note that the imminent retirement of *“perhaps the key person in the teaching of dental technology... does not bode well for the future of this degree programme.”* They highlight the significant teaching input to the course from the Materials Science Division and the fact that this element of the course is taught to both technology and dental students.

3.2.4 Diploma in Dental Hygiene

The Reviewers applaud the work of the course director and clinical tutor on this two year programme for their *“very evident enthusiasm for the course and its students and having a preventative theme as the backbone of*

the programme.” They note that *“the curriculum is encompassing and assessment of student progress is continuous throughout the two years and uses a number of different and appropriate methods.”* The Reviewers were impressed with the level of interaction between students on the course and other healthcare professionals within and outside dentistry and were pleased to see that two students each year could participate in a two week exchange with a Swedish school. They note that there is clear evidence of a more than adequate availability of appropriate patients within the School but feel that *“there was a lack of communication, correct treatment planning and supervision when students attend community based clinics outside the school, particularly for the placement of fissure sealants.”*

3.2.5 D.Ch.Dent. Programme

The Reviewers report that this relatively recently introduced part-time doctorate *“should provide clear evidence of continuing professional development if and when [it] is introduced by the Dental Council of Ireland.”* In addition to completing six out of nine modules over 18-20 months, practitioners must attend on Tuesday afternoons and carry out clinical work under supervision. The Reviewers feel that although the modular nature of the course lessens the School’s teaching role, it does nevertheless take up a *“significant number of teaching, clinical supervision and facilities hours.”* They wonder whether *“this is yet another course sited in and around a School bursting at the seams with commitments for its teaching division.”* The Reviewers report that the course is considered to be cost neutral but that this has not been verified by a formal evaluation.

3.2.6 Diploma in Conscious Sedation

The Reviewers report that this course is *“well organised and enthusiastically delivered by the teachers”*, with a huge time commitment being given by one of the clinical staff. They report that while the programme appears to *“serve well the national dental services needs, it bears little equivalence with dental school activities in most of the schools in the British Isles and Continental Europe”* and they suggest that *“critical evaluation and integration within the primary tasks of the school is warranted.”*

3.3 RESOURCES

The Dublin Dental Hospital is a relatively small but purpose built facility accommodating all programmes and activities for the School of Dental Science. The Reviewers feel that the facilities for dental education are *“excellent and well used”*, including a modern library and that *“the clinical activities are carried out in modern dental units and well supplied operatories.”* They report that *“the high quality Central Sterilisation Unit supports the execution of a large range of clinical procedures by staff members and the different student groups.”* They note that the Hospital has invested heavily in well equipped research laboratory facilities and that, provided the necessary resources are available, a recently acquired adjacent building will allow reorganisation of administration, study and teaching facilities.

3.4 RECOMMENDATIONS

3.4.1 Research

- i) The School is advised to draft a new strategic plan for research for the period 2009-2013 with aims and agreed outcome measures to co-ordinate and facilitate the scientific activities.*
- ii) The Directorship of Research should be restructured to an internal research committee, chaired by the Dean with the responsibilities of planning activities and allocation of resources. The administrative support from the Dean’s office seems most likely sufficient to support the committee.*
- iii) Alternatively, the role of the Director of Research should be clarified and the jurisdiction clearly defined. However, the Director of Research should document output on a yearly basis and distribute the yearly research KPI’s among all in the dental school and the Hospital Board, Dean of the Faculty and the Vice-Provost. In this exercise, the Dean should separate full scientific papers with impact from opinion articles, case-reports and non-impact reports. On this basis personal performance could also be assessed.*

- iv) *A yearly monitor of on-going research projects and PhD projects is needed. The Reviewers feel that it must be possible to publish at least 4 full-length scientific papers with impact from each PhD thesis. The planning of appropriate PhD programmes must be the task of the professor/mentor.*
- v) *The Reviewers feel that focus and concentration of research efforts on the best performing groups and people will help to achieve the goal of increased research output. There are several clinical lecturers and professors who are spread thinly on many aspects in their appointment. The Reviewers realise the difficulty for staff to meet the heavy demands of clinics, teaching, research and administration. A further concentration on efforts in which each staff member is the best and/or has the most time allocated, may help to alleviate some of the feelings of heavy workload.*
- vi) *The Reviewers see the need for more stimulation from the College for excellent research. They recommend that the College confirms its commitment to the dental school by providing some research funds. This can be done for example on the basis of a "reward system" for accomplished PhD's or on the basis of excellent publications or other KPIs. Some transfer of research-earmarked monies (e.g. €100k) will indicate and signal how the College is attached to an internationally esteemed dental school and will stimulate the staff to accomplish excellent research. Reciprocally, with this measure, the staff should feel a stronger connection to the University.*
- vii) *A yearly competition for a School-funded PhD position (funded at the cost of some less productive research efforts) could help to stimulate excellent research to thrive.*
- viii) *The Reviewers recommend improved research collaborations with other departments in Trinity: knowledge of other biological systems may be researched in oral systems and visa versa. The oral cavity is a very good model for infectious and inflammatory diseases, including mucosal immunity, and this should be advertised and exploited.*
- ix) *Educational research could be implemented as a specific line of research within the school as long as it has the prospect of good outside funding and that research reports are published in peer-reviewed journals with some impact. Care should be exercised that the projects are "generic" i.e. also applicable to educational programmes other than just dentistry.*
- x) *The Reviewers recommend that the Dental School and Hospital anticipates the consequences of future retirements in its staff recruitment policy.*

3.4.2 Teaching & Learning

3.4.2.1 B.Dent.Sc.

- xi) *Teaching on the undergraduate dental science programme is based on the Problem Based Learning (PBL) approach which allows little flexibility in the curriculum. Further integration of basic sciences with clear reference to dentistry through the whole curriculum would be beneficial to facilitate undergraduates' learning. This action would possibly reduce dental staff time with these topics.*
- xii) *Considering the scope of comprehensive treatment provided by both undergraduate and postgraduate students, the lack of opportunities for 3D imaging under the supervision of a specialist in the field was a surprise to the Reviewers. Solving this problem is a strongly recommended by the Reviewers.*
- xiii) *The present situation does not allow an adequate exposure to dental team work since the students (nurses, hygienists, technicians and dental students) have little if anything to do with each other at a clinical or intellectual level. The School should consider better collaboration with different programmes to fully utilise this exceptional educational opportunity.*
- xiv) *Although students appeared to be happy with PBL they were often unsure of the aims and learning outcomes of several aspects of the curriculum. These could be clarified by short descriptive lectures at the beginning of specific modules/courses, or the provision of more information on Blackboard. In*

this respect, an audit of the performance of students under PBL compared to the previous conventionally delivered programme would seem appropriate at this juncture.

- xv) *In view of the limited benefit to so few students of the exchange programmes established according to the Bologna Declaration, the School should consider opting out and possibly formalising an elective period programme of, for example, 4 weeks duration and based on a research project.*
- xvi) *An independent research track for all students concluding with a minor research project/literature review is recommended to increase critical and scientific thinking of the future oral health professionals.*
- xvii) *The Curriculum Committee might wish to carefully consider the workload of the second year which was described as overloaded by the students. By the same token, the relevance of Physics and Chemistry in the course was questioned, and training in Practice Management in the latter part of the course would be appreciated by students.*
- xviii) *Active interaction by students and staff members with their counterparts in Trinity College ~~however~~, may create further learning environments with positive consequences to be enjoyed at various levels of the school's activities.*

3.4.2.2 Diploma in Dental Nursing (part-time and full-time)

- xix) *Interaction in both clinical work and education of students in Dental Nursing with undergraduate dental students has plenty of room for development.*
- xx) *Given the very high quality of the E-learning programme for the part-time diploma nurses it is surprising that some if not all of this material is not used in the full time programme: this would significantly reduce the already heavy teaching burden of the tutors and more particularly academic staff, and the increased synergy between the part-time and full-time Dental Nursing programmes would be beneficial.*

3.4.2.3 Dental Technology Degree

- xxi) *The magnitude, role and significance of this programme should be carefully assessed in relation to other activities in the Dental School.*

3.4.2.4 Diploma in Dental Hygiene

- xxii) *Students on the course mentioned a lack of knowledge of basic oral biology, dental anatomy and dental terminology at the time of entering the clinics. The possibility of a basic core course on these subject areas could be arranged as students first enter their course. Such a lecture course could be given simultaneously to hygienists, technicians and nurses.*

3.4.2.5 D.Ch.Dent. Programme

- xxiii) *It is recommended that relevant specialty students should have more integration with the Hygiene Department.*
- xxiv) *Because of the implications of dissertations to the research standard of the School, it is recommended that research supervisors make strong efforts to achieve the goal of at least one peer reviewed paper published.*
- xxv) *To foster outside links in research within the University as a whole it is recommended that more thought be given to placing students for their research in other university departments, particularly as there is already evidence of such collaboration.*

- xxvi) *Since entry requirements for the doctorate includes at least one postgraduate dental qualification, much of the core course has been learned both at undergraduate level and again at postgraduate level. Clearly, certain aspects of the course were very relevant such as statistics, research methods, scientific writing and these might deserve more emphasis in the future, probably jointly with other faculties. The Reviewers recommend reorganising the content of the core course.*

3.4.2.6 Clinical Dentistry Diploma

- xxvii) *The course organisers may wish to consider related modular courses in the British Isles where learning is student directed and supported by clinical away days, usually at weekends.*
- xxviii) *Critical integration of the course within the primary tasks of the school is warranted.*

3.4.2.7 Diploma in Conscious Sedation

- xxix) *Critical integration of the course within the primary tasks of the school is warranted.*

4. RESPONSES FROM THE SCHOOL AND THE FACULTY DEAN

In overall terms, the School welcomes the general thrust of the review and accepts the recommendations arising with some caveats which will require further consideration at implementation stage. The Faculty Dean notes with satisfaction the range and size of the programmes offered by what the Reviewers acknowledge is a 'relatively small but purpose-built facility accommodating all programmes and activities'.

The School feels that there were a "*couple of omissions from the review which the School believes are worthy of mention.*" No reference was made to the "*previous review and the significant investment in new buildings and new staff made by the Dublin Dental Hospital in response to that review.*" Given that there are further resources issues arising in this review, the School also feels that "*it is regrettable that there was no acknowledgement of the Dental Hospital Board in the report.*" The other omission, they feel, "*is the widespread concern among staff at the way in which the College's responsibility for pre clinical training has been abandoned with the consequence that the Dental Hospital is now funding most pre clinical teaching without any matching transfer of resources.*" .

The School welcomes the review report recommendation that there be "*greater integration of teaching among students in different courses, between the full time and part time dental nursing courses, basic sciences throughout the courses and staff and student integration within the rest of the College.*" They feel that "*there may be a need to critically evaluate recommendations regarding the relevance of physics/chemistry and student workloads in the context of learning outcomes.*"

The Dean of the Faculty notes that "*the quality of the students in the School is very high, as evidenced by the perennially high demand for its courses,*" and the Reviewers' favourable opinion of "*the rigor of the undergraduate Dental Science programme.*" The Dean comments, however, that "*the interaction with the Erasmus programme is poor.*" The review recommends the need to re-evaluate the necessity and viability of a number of courses, and the School "*understands this recommendation to be helpful in identifying where the considerable workload of staff can be reduced to give greater priority to research.*" The Dean acknowledges that the staff of the Dental Science School "*bear a considerable workload and have shown high productivity.*" He also recognises that there "*is some duplication of workload in certain courses and would like to see greater synergies between them.*"

The Dean endorses the Reviewers' statement that "*research is a fundamental aspect of all university departments and Schools*" and he notes that the School has "*committed itself to research and the development of dental professionals capable of research with its professional doctorate programme...*" Whilst the School accepts the need to prioritise research, it is also conscious "*that staff are employed in a Hospital which identifies the community's need for a range of dental skills which might not otherwise be provided, and that these courses are funded by the Dental Hospital.*"

The School accepts the need to enhance “*skills and competencies in research skills, case presentations, communication, practice management etc.*” However, the School feels that “*some of the recommendations are proposed at the expense of existing arrangements for example Erasmus, and would need to be further evaluated.*” The School welcomes the Reviewers’ recommendations regarding increased collaboration in teaching and research within the college.

The Review supports the planned increase in academic space in the Dental Hospital and recommends the purchase of equipment, recruitment of staff and succession planning of key academic staff. The School would welcome “*these recommendations but is conscious that the College may not have resources to implement them. The School notes that the College will need to engage formally with the Hospital on these and all other recommendations concerning resources.*”

The Review recommends the alignment of the School’s research with the College research plan in a new School Research strategic plan, a review of research governance, performance management and monitoring and a greater College commitment to research in the School. The School “*accepts the need to re-orient priorities to a greater degree towards its research activities which have developed substantially in recent years. A move to requiring publications of four research papers from each PhD is a north European model but may not be possible to implement in a short time scale or necessarily desirable in terms of quality.*” The School accepts “*that there is need for greater publication output from higher degrees and the proposals in respect of monitoring and performance management of this area will assist this objective.*”

The Dean notes with satisfaction that the trend for PhD completions has been increasing over the decade. He also acknowledges the concern raised by the reviewers with the research outputs of the school and the lack of resources offered by the University to this vital element of its strategic plan. He commends the School for “*acknowledging the requirement to improve in this area.*” Noting that high quality, peer-reviewed, publications are “*a prerequisite for the long term health of research in the School,*” the Dean “*endorses the recommendations for improving research included in the report.*”

5. RECOMMENDATIONS TO COUNCIL AND BOARD

In light of the review report and the responses from the School of Dental Science and the Faculty Dean it is recommended that:

1. The School of Dental Science working closely with the Dean of the Faculty of Health Sciences, and other relevant Academic Officers, to consider the detailed recommendations of the Review Report and draw up an implementation plan² for Council approval.
2. College in association with the Dublin Dental Hospital should establish a collaborative partnership in the delivery of the teaching and research objectives of the School of Dental Sciences.

**Provost
June 2009**

² See *Procedures and Protocol for Quality Review of Schools 2008/09* at <http://www.tcd.ie/vp-cao/qu/qopdf/adrpack2.pdf>