**Academic Committee Review Panel – MSc Restorative Dental Practice**
**October - December 2013**

***Executive Summary***

**Summary:**
Following receipt by the Registrar of a report raising concerns about assessment data in the MSc Restorative Dental Practice programme from 2006-07 to 2011-12, the Chair of Academic Committee established an Academic Committee Review Panel to investigate these issues. The Panel met with the staff responsible for the management and delivery of the programme and considered a wide range of documentation. The report outlines the work of the Panel and its conclusions and recommendations. A full set of recommendations is set out in paragraph 5.

**Action proposed:**
That the Chair of AC considers the report and decides what, if any, action is required.

**Authors:**
AC Review Panel for MSc Restorative Dental Practice

*Key to abbreviations:*
AC       Academic Committee
BoE      Board of Examiners
CPD      Continuing Professional Development (EDI Unit)
EDI      Eastman Dental Institute
IMB      Institute Management Board (EDI)
MAPS  Mathematical and Physical Sciences (Faculty of)
RDP      Restorative Dental Practice (MSc)

**1       Introduction**

1.1      The *Academic Manual* provides for the establishment of an Academic Committee Review Panel to investigate serious academic quality assurance-related problems which might arise from time to time within UCL.

1.2      In July 2013, the Director of the Eastman Dental Institute had informed the Registrar of serious concerns arising on the MSc Restorative Dental Practice programme concerning the accuracy of assessment and examination marks. A meeting was held on 25 July 2013 between the Head of Examinations, Student and Registry Services and key EDI staff and the Faculty of Medical Sciences Graduate Tutor (Research) to discuss the concerns. The Registrar was concerned that the seriousness of the problems identified warranted further investigation and informed the Chair of Academic Committee who agreed to establish an Academic Committee Review Panel to look into the problems.

1.3     The membership of the Panel was as follows:

- Dr Caroline Essex, Faculty Tutor, Mathematical and Physical Sciences [Chair]
- Dr Arne Hofmann, Faculty Tutor, Arts and Humanities and Social and Historical Sciences
- Mr David Ashton, Director of Student Administration, Student and Registry Services
- Mr Rob Traynor, Quality Assurance Coordinator, Academic Services [Administrative Secretary]

1.4     The Panel met on five occasions to consider the matters, 29 August, 19 September, 14 and 25 November, and 10 December 2013. The Panel also interviewed relevant EDI staff at four meetings held during October and November 2013 (see the schedule in Annex 2). In each interview session, the Panel Chair explained to the participants the purpose of its review and advised that the Panel was not a disciplinary review body, but that its purpose was to identify the nature of the problems and recommend actions to address and prevent their recurrence.

1.5     The Panel agreed that in its report to the Chair of AC it should aim to:

- Identify any problems in the organisation of the programme and the wider EDI. In particular:
    (i)     procedures for processing examination and course work marks.
    (ii)    quality assurance mechanisms for the student progression data and how it is checked for accuracy and robustness.
    (iii)   the reporting structure for progression data both within the EDI (including the relevant Board of Examiners) and with the wider faculty.
- Ascertain if the problems are limited to the MSc RDP programme or whether other EDI programmes are affected.
- Acknowledge any recent changes to relevant processes and procedures where these have been made.
- Make recommendations for improvement and draw attention to other matters, including possible ramifications as necessary.

1.6     The Panel requested and received a number of documents from the EDI staff to assist its deliberations, listed at Annex 1. All the documentation requested was supplied.

1.7     This report records the findings of the Panel and is intended to assist the EDI and the MSc RDP programme to take action to improve the management and delivery of the programme and to advise the Chair of AC accordingly.

1.8     The Panel's recommendations can be found in section 5 of this report.

**2       Background**

2.1     Following the merger of the EDI with UCL in 1999, the EDI expanded its Continuing Professional Development provision, which had become mandatory for dentists in 1998. The RDP programme was one of the CPD

Unit's diploma programmes and was re-launched as a Masters programme in 2008 in response to student demand.

2.2    The Panel noted that no major problems with the MSc RDP programme had been raised centrally at UCL, although the UCL Registry (now UCL Student and Registry Services) had raised concerns with it in regard to student completion times. This was partly related to the complexities generated by the programme's status as a flexible modular programme, with students, mostly working dentists, able to complete their studies over five years, often resulting in a large number of deferrals. The programme was restructured in 2012 to help address these concerns.

2.3    EDI Registry staff first noted discrepancies in student results and progression data in the summer of 2011 and identified further problems in January 2012. In November 2011 concerns had been raised at faculty level regarding the paperwork for the BoE, which the Faculty was not able to sign off. The problems included late submission, transcription errors, anomalies in paper-work and unacceptable presentation. EDI Registry staff investigated further and found discrepancies in the assessment data and brought the problems to the attention of the Dean of Students (Academic) and UCL Registry Officers.

2.4    The January 2012 BoE meeting also generated a number of queries regarding the data and, following discussion with the Faculty, it was agreed that the CPD Unit staff review and update the MSc RDP programme database. When problems were again identified with the data for the January 2013 BoE meeting, EDI Registry officers started a thorough data check comparing the CPD Unit mark-sheets with the Portico Student Records System. The resulting report found a large number of errors and the EDI Director informed the Registrar in July 2013.

**3    Main Issues**

*Key Documentation*

3.1    The main document considered by the Panel was the EDI Registry investigative report into these problems, "Review of Data Quality of Assessment Results MSc Restorative Dental Practice (2006-07 - 2011-12)". The report was initiated by the EDI Registry staff following on-going concerns arising from successive BoE meetings and the faculty. The scale of the problems became apparent on its circulation to key EDI staff in June 2013.

3.2    The report found a large number of discrepancies in the data between the assessment and module results and progression data received by the BoE and those which were recorded onto Portico. The report outlined where the errors had a measurable impact and found that[1]:

- In 220 cases an incorrect overall module result[2] was recorded.
- In 83 cases an incorrect module outcome was recorded, based on the incorrect overall module result. This included 2 "pass" outcomes

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[1] Review of Data Quality of Assessment Results MSc Restorative Dental Practice 2006-07 and 2011-12 – "Impact of Error" paragraph 4.5, page 17.
[2] Note - the "result" is the specific mark for a module, the "outcome" is the final grade for the module (i.e. fail, pass, distinction).

recorded as "fail", 68 "passes" recorded as "distinction" and 13 "distinction" recorded as "pass."

- In at least 2 cases this impacted on final awards to students including, most seriously, 1 case where a student was reported to the BoE as a "pass" but recorded on Portico as a "fail"[3] and another reported as a "pass" but then awarded a "distinction".

The report suggested that the causes of the errors were principally human error, but also noted other factors including unclear processes, non-uniformity of results pro-forma or of presentational conventions, use of non-UCL candidate identifiers and a failure to draw known errors to the EDI Registry's attention.

3.3 The EDI Registry officers confirmed the report's conclusion to the Panel that they did not regard the investigation as definitive or complete and recommended that a more thorough audit of the student results and progression data be undertaken. For instance, the Panel's interviews with the CPD Unit administrative staff had discovered a source of some of the errors not identified in the report. This was a recurring error arising from an incorrect formula in the excel spreadsheet used, which was not checked and spotted by the CPD Unit staff and then carried over to subsequent years. It was not possible to identify this in the report as the EDI officers were checking discrepant marks rather than examining the formulas used. The Panel therefore noted that an audit would require assistance from someone familiar with the local datasets to help access the data. The report also suggested measures to address the issues which included a skeleton business process map, new checklists and a new programme database.

3.4 The Panel commended the EDI Registry officers on producing the report and in ensuring that the problems were brought to the attention of the EDI senior management and the Registrar.

3.5 The Panel requested and received a Timeline of key events which it was informed had been compiled in consultation with staff, though no author was attributed. The Panel found the Timeline to be helpful in understanding the key events. In the interests of fairness and to assist with the investigation, it was distributed to all of the staff interviewed. The Timeline did not claim to be a definitive record, and included a "disclaimer" that it was based on staff recollection cross-referenced with e-mail messages and minutes of meetings. However, a number of interviewees expressed considerable disagreement with some of the details in the Timeline, such as attendance, outcomes and agreed actions of specific meetings, job titles and start dates.

3.6 The EDI submitted a process flow chart and a staff organogram. The flow chart showed at least three points of transcription from the original mark-sheet to the BoE mark-sheet to the "Brain" (the in-house MSc RDP programme database used to store the assessment and examination data) and finally, via the EDI Registry, to Portico. The Panel noted that the flow chart also did not contain a point at which the data would be checked.

3.7 The most recent Internal Quality Review report of the EDI contained no reference to any of the current problems, although it recommended that the CPD Unit's programmes were brought into line with UCL Annual Monitoring

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[3] During the interviews, the Panel was informed that students were yet to be notified.

processes, which appeared to have been taken up. None of the external examiners' reports noted any concerns with the quality of the data and appeared to take its reliability as read.

*Interviews*

3.8    One of the most serious matters raised in the EDI Registry report was that staff, including senior staff within the CPD Unit were aware there were issues with the data but did not take any action to address this. The report notes that: *"Failure to highlight to the EDI Registry Office known errors in the data reported on at least two occasions"*[4]. A possible explanation for this is that the CPD Unit members of staff the Panel met appeared to be uncertain of where responsibilities lay for quality assurance processes and thought that this primarily lay with other people. This was borne out to a certain extent in the job and role descriptions the Panel saw where quality assurance responsibilities were not clearly apparent.

3.9    There also appeared to be an assumption amongst some of the EDI staff that the "Brain" was the main source of the problems and that "fixing" it would solve the issues. Bespoke local databases had continued to be used for these processes in the EDI following the merger with UCL, rather than Portico (see paragraph 3.11) and the "Brain" had been through a number of versions, from an Access database to the current Excel spreadsheet.[5] Much of the activity to address the data problems in 2011 and 2012 appeared to focus on reviewing and updating the database.

3.10   Some administrative CPD Unit staff the Panel met did not believe that the Unit's other programmes would have similar problems with their data. Their view was that these programmes had fewer students (less than 10) than the MSc RDP, with data easier to check and to ensure was correct before submission to the BoE. The MSc RDP was much larger (over 70 students) and was complicated by the more challenging nature of the flexible modular programme, with students not required to select modules year on year and thus able to defer and follow differing lengths of periods of study. The assessment marks were also more complicated and required more staff time to process than the other programmes. However, some of the academic staff believed that it was possible that there could be problems on the other programmes due to their shared lack of built-in checks and standardised processes and advised that any new processes should cover all of the EDI programmes to ensure consistency. The interviews with CPD Unit administrative staff made it clear to the Panel that administrators had to create their own spreadsheets (where not already existing) as there was no standard spreadsheet to use.

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[4] Review of Data Quality of Assessment Results MSc Restorative Dental Practice 2006-07 and 2011-12 – "Suggested Causes of Error" paragraph 4.3, page 16.
[5] The Head of Examinations, Student and Registry Services, advised the Panel Secretary that whilst it was preferable that Portico was used as a tool for recording and storing examination and assessment marks, local databases, fairly common throughout UCL, could be effective as long as robust quality assurance and checking mechanisms were in place. However, the use of Excel spreadsheets rather than actual databases, such as Access, often proved problematic due to the greater risk of errors. Databases are less prone to this and it is easier to identify when changes are made and often, by whom.

3.11    There was a widespread view amongst the staff that it was not possible for CPD Unit staff to use Portico as a tool to help process examination and assessment data. However, the interviews revealed that only the EDI Registry staff appeared to be fully trained and experienced in its use. The CPD Unit administrators had only limited access and some members of staff had only gained access in recent months.

*Remedial action undertaken*

3.12    The Panel was informed by the current Director of the CPD Unit and by the EDI Registry Staff of action already taken to address the problems. Documents outlining new processes, including check-lists were submitted to the Panel. A review of the administrative function had been conducted in the previous session and was under consideration by the Institute Management Board, which considered proposals for a re-organisation of administrative roles, improvements to training and for structural changes so that the programme administrators reported to the EDI Registry. The IMB June 2013 minutes, the latest received, indicated that EDI was undertaking further work to review administrators' workloads and reporting lines. The CPD Unit Director's view was that the problems were not the fault of individuals, but showed the necessity for a solution to be provided by the EDI collectively.

3.13    Other documents submitted by the Director of the CPD Unit included a results process flow chart and a retention schedule for records management. The flow chart laid out each of the stages involved in the processing of the marks data, including checking stages by the EDI Registry and the Programme Director. The Panel considered that whilst the new processes appeared to be robust and thorough, it would also help the EDI to seek the views of the Graduate Faculty Tutor before their implementation to take into account best practice from elsewhere in the Faculty.

**4       Conclusions**

4.1     The Panel identified the following points as the chief reasons for the problems found in the MSc RDP programme and within the EDI:

(1)      Human errors led to the corruption of the assessment data, specifically through transcription errors in moving data from one Excel spreadsheet to another. One error involved a staff member inadvertently placing a formula in the wrong location, not identifying this and carrying it over to subsequent years. The errors involved more than one member of staff.

(2)      The errors were likely to occur due to the complex and inconsistent processes used, including the use of the "Brain". The transfer of data several times across mark-sheets, BoE reports and the "Brain" before finally being recorded onto Portico added to staff workloads by duplication of tasks and created greater risks for error. Frequent changes to the "Brain" and other processes compounded the complexity of the assessment data processes.

(3)      Poor quality assurance processes, without adequate oversight or checking of the transcription work, meant that once made, the errors were not identified and in some cases, such as the formula error, carried over to subsequent years. This was compounded by poor

record keeping both electronically, in the use of Portico as a final stage repository for data rather than as an "active" database, and in hard-copy such as the loss of original mark-sheets and BoE documents, stored in a basement room in the CPD Unit's building, to flooding, twice.

(4)     Some staff did not regard Portico as fit for purpose to serve the BoE needs, hence the need to use a local database and spreadsheets instead. The faculty tutors also informed the Panel that it was common practice across the faculty to use local databases instead of Portico for BoE purposes. From the interviews with staff it was clear that the understanding and use of Portico was uneven across all levels of staff. Many staff clearly did not access it or did so only on a limited basis.

(5)     The processes for the administration and management of the programme did not appear to have been adjusted once the RDP student numbers increased following the change to Masters level, nor were adjustments made for the increased importance of summative assessment at this level once this had occurred.

(6)     The challenging nature of the flexible modular programme and its students, many of whom are professionals with frequent deferrals to their studies, undoubtedly contributed to the problems. The administrative structure struggled to cope with the scale of demand for the programme, the increase in numbers and the nature of the student body.

(7)     The Panel was informed by some of the CPD Unit staff that the complexity and size of the MSc RDP programme meant that problems were more likely to occur there than on the other EDI programmes. However, other CPD Unit staff informed the Panel that it could not be certain that the issues were confined to the MSc RDP programme as other programmes also appear to use bespoke practices and local databases and do not use Portico as the main record. Their smaller size may make them more manageable and thus errors less likely, but this should not be taken for granted.

(8)     Line management structures did not clearly indicate responsibilities for oversight of quality assurance mechanisms, which meant in practice that the data assessment work was not checked. Furthermore, the vertical line management chain in both the EDI and the CPD Unit did not reflect horizontal workflows between the two (e.g. the EDI Registry only had oversight of the final stage of the process, putting the data onto Portico). This is hindered by the physical separation of the CPD Unit and the EDI in different buildings. It was also not clear whether the induction and training of administrative staff was adequate.

(9)     Both the academic and administrative staff the Panel met acknowledged the high work-loads they experienced. The Panel was informed that these problems were known in 2006-07 and although there had been a re-structuring of roles in the intervening years, it was clear that these problems still exist. Whether the apparent duplication in some of the assessment data processes is a contributing factor is not clear. The Panel also noted the high administrative staff turn-over at times.

(10)     The work-load issue also affected the academic staff, with only one full-time academic in the CPD Unit, who was clearly heavily burdened with the role, although steps had been taken to address this with the recent recruitment of more part-time academic staff.

(11)     The Panel noted that the errors had been discovered by junior EDI Registry administrative staff and the investigative report had been conducted by them. The Director had informed the Registrar once the scale of the problems was identified in July 2013. However, there seemed to be a lack of ownership of these matters among the senior staff with many stating that they had believed their colleagues responsible for addressing the issues. This may have been engendered by a certain lack of clarity, particularly in regard to quality assurance, in some of the roles and job descriptions that the Panel saw.

## 5        Recommendations

5.1     The Panel recommends that the following action is taken by the EDI:

(1)     A full professional review of the MSc RDP data should be commissioned by the Chair of the Education Committee, with support from the relevant officers within UCL Student and Registry Services. The review should cover all data since the establishment of the programme, including, where possible, a review of the surviving hardcopy raw data. The reviewer or reviewers should be external to the EDI, with the EDI being asked to co-operate fully, to comply with all data requests and to provide any other needed assistance.

(2)     The professional data review as per recommendation (1) should extend to a thorough check on the other EDI taught programmes to be certain that the problems associated with the MSc RDP programme are not evident elsewhere within EDI.

(3)     The January 2014 examination board for the MSc RDP programme should be postponed until the results of the data review are known and any arising problems addressed.

(4)     Once the data review has taken place, the Board considering the 2012/13 results and awards should also consider the revised retrospective data and recommend corrected and revised results and awards for the duration of the programme as needed. The board must be attended by a senior and experienced faculty observer. There should also be a UCL observer in attendance.

(5)     Once this has taken place, the EDI should assess the impact of any changes to results and awards on individual students. It should determine appropriate communications to these students, taking advice from the Chair of Education Committee and UCL Legal Services (Finance and Business Affairs), especially where students might potentially have legitimate claims to damages and compensation.

(6)  If it is not possible for the professional data review to ascertain and validate reliable results for all candidates for the duration of the programme, so that uncertainty over the appropriate results for past and/or current students remains, the EDI should consider the following options with the Chair of Education Committee and UCL Legal Services (Finance and Business Affairs):

  (i)  Proceed on the working assumption that the data in Portico is correct unless known to be otherwise, even if this is not possible to confirm.
  (ii)  Re-assess or offer to re-assess and offer compensation for inconvenience and loss of revision time.
  (iii)  As a last resort – depending on the findings of the full data review and the severity of doubts about the accuracy of results based on unrecoverable raw data – consider termination of registration and negotiate financial settlements.

(7)  Review and where necessary reform EDI governance to ensure clarity and consistency of processes and to improve the effectiveness of the relationship between the CPD Unit and the rest of EDI.

(8)  Review and where necessary reform line management in the EDI and ensure that clear statements are developed, where they do not already exist, that specify which staff (both academic and administrative) are responsible for which Quality Assurance processes and that this is made clear in the job descriptions. The line management chain should be consistent and integrated across the EDI.

(9)  Review the administrative staff training and workloads as part of the review of processes. The review should consider:

  (i)  Work allocations and workloads. If necessary, the EDI should consider additional appointments to ensure that there are enough staff to carry out the work.
  (ii)  Thorough training for administrative staff carrying out assessment-related work, including the use of Portico (see matters for attention outside of the EDI below).

(10)  Swiftly put in place robust new processes, including appropriate safeguards and checking procedures for the assessment and examination work. The current EDI process proposals should form part of this work. Processes should be clear and consistent across the EDI.


*Matters for attention outside of the EDI*

(11)  In the light of the issues, comments made by EDI and the CPD Unit staff, and the working knowledge of the Faculty members of the Panel, the Panel suggests that the Chair of AC may like to consider whether a review of Portico and its relation to assessment processes and practices across UCL is necessary. Such a review might consider:

(i) The use of Portico in assessment and examinations processes and the practice of academic units using their own local records systems instead.
(ii) A determination as to whether the concerns raised in this review are shared by other academic units where Portico is not able to meet their assessment and examinations process requirements, particularly the Portico reports.
(iii) The Portico support and training for staff in academic units.

**Annex 1**

**EDI Internal Review of the Programme's Assessment Results**

- Report: Review of Data Quality of Assessment Results MSc Restorative Dental Practice 2006-07 and 2011-12

**EDI Documents**

- MSc RDP Timeline
- MSc RDP Key Staff
- MSc RDP Reporting Lines Organogram
- MSc RDP Data Flowchart for Results Processing
- MSc RDP Programme Specification
- EDI Structure: A Guide January – December 2009
- External Examiners Reports (Prof D Samarawickrama 2011-12 and 2010-11; Prof S Dunne 2009-10; Mr J McCullagh 2008-09; Mr S Propat 2009-10; Prof A Watts 2008-09 and 2007-08)
- MSc/PG Diploma Restorative Dental Practice Board of Examiners Minutes 2007-13
- Minutes of the Institute Management Board and the EDI Executive Education Committee

**Other Documents**

- EDI Internal Quality Review Report 16 March 2010
- EDI IQR Action Plan Second Response 25 March 2012

**Information provided by MSc Restorative Dental Practice Staff**

- Job descriptions, roles and other documentation (supplied in confidence)
- Proposed new process Check-list documents and flow-chart

## AC REVIEW PANEL – MSc RESTORATIVE DENTAL PRACTICE

## INTERVIEWS 7, 24 and 25 October and 20 November 2013

**Thursday 7 October 2013**

Session 1     Professor Stephen Porter (Director of the EDI)

Session 2     Ms Nisha Gosai (Principal Education Administrator) and
              Mr David Howells (EDI Registry Officer)

Session 3     Dr Dave Spratt (Faculty Graduate Tutor (Research)/Divisional
              Graduate Tutor) and Professor Tim McHugh (Faculty Graduate Tutor
              (Taught))

Session 4     Ms Vanessa Powell (EDI Institute Manager)


**Thursday 24 October 2013**

Session 5     Ms Nisha Gosai (Principal Education Administrator) and
              Mr David Howells (EDI Registry Officer)

Session 6     Ms Josephine Carr (CPD Unit Administration and Business Manager)

Session 7     Ms Victoria Banks (former Programme Administrator 2007 -13 with
              responsibility for MSc RDP. Now Executive Assistant to Prof
              Eder/CPD and Short Course Coordinator at the CPD Unit and Short
              Course Development Team, UCL Enterprise)

Session 8     Ms Christine Weir (Programme Administrator Jan 2011, responsible
              for MSc RDP)

**Friday 25 October 2013**

Session 9     Professor Andrew Eder (former EDI Director of Education 2009-13.
              Now Associate Vice-Provost UCL Enterprise/Director of CPD and
              Short Course Development)

Session 10    Ms Vanessa Powell (EDI Institute Manager)

Session 11    Dr Chris Louca (CPD Unit Director and Programme Director, MSc
              RDP)

Session 12    Dr Susan Parekh (EDI Director of Education, was Deputy Director of
              Education Jan 2012-Jan 2013)

**Wednesday 20 November 2013**

Session 13    Professor Andrew Eder (former EDI Director of Education 2009-13.
              Now Associate Vice-Provost UCL Enterprise/Director of CPD and
              Short Course Development)