

No.

**Ex-post Evaluation Report  
on  
the Project for Dental Education  
at University of Peradeniya  
in Sri Lanka**

**October 2006**

**Japan International Cooperation Agency  
Sri Lanka Office**

**TEAMS Pvt.CO.LTD.**

SLO
JR
06-007

## 事後評価調査結果要約表

評価実施部署：スリランカ事務所

<b>1. 案件の概要</b>															
国名：スリランカ民主社会主義共和国	案件名：スリランカ・ペラデニア大学歯学教育プロジェクト														
分野：保健・医療	協力形態：プロジェクト方式技術協力（現・技術協力プロジェクト）														
所轄部署：医療協力部（現・人間開発部）	協力金額： 729,000,000 円														
協力期間	1998年2月1日～ 2003年1月31日														
	先方関係機関：ペラデニア大学、高等教育省、保健省 日本側協力機関：文部科学省、厚生労働省、鶴見大学、東京医科歯科大学、愛知学院大学、佐賀医科大学、日本歯科大学、日本大学、朝日大学、北海道大学、北海道医療大学、新潟大学、広島大学、日本私立歯科大学協会、他														
他の関連協力：無償資金協力「ペラデニア大学歯学部改善計画」（1996～1998年）															
<p><b>1-1 協力の背景と概要</b></p> <p>スリランカでは、悪性腫瘍のうち30%が口腔癌が占め、またその他の歯科口腔疾患によっても患者の生活の質が損なわれており、歯科口腔疾患が深刻な問題となっている。国民の歯科口腔保健に対するニーズが高まる中で、限られたし機材や財源を有効活用した治療および予防や早期発見のための歯科医療従事者の養成が求められていた。</p> <p>ペラデニア大学歯学部はスリランカ唯一の歯科医師養成機関であるが、既存の歯学部の施設・機材は老朽化が進み、専用の実習病院もなかったことから、わが国の無償資金協力により、歯学部ならびに歯学部附属病院が新たに建設された。</p> <p>同無償資金協力の効率的運用およびスリランカにおける歯科口腔疾患の対策のため、さらには歯科公衆衛生を通じた予防・治療サービス全般の向上のための技術協力が要請された。</p>															
<p><b>1-2 協力の内容</b></p> <p>ペラデニア大学歯学部において、歯科口腔保健の分野における教育、医療サービス、研究のための技術協力を行った。</p>															
<p><b>(1) 上位目標</b></p> <p>スリランカ国民の口腔保健状況の向上を目指し、ペラデニア大学歯学部と教育病院における歯学教育、サービス、研究活動の継続的な発展を推進する。</p>															
<p><b>(2) プロジェクト目標</b></p> <p>歯学部と教育病院のスタッフの能力を向上と機能強化を図る。</p>															
<p><b>(3) 成果</b></p> <p>1) 教官、技術スタッフ、看護師の知識および技術が向上する。 2) 研究や卒後教育プログラムを開発・実施する能力が向上する。 3) 歯学部と教育病院における施設と機材の維持管理にかかるシステムや方法が機能する。</p>															
<p><b>(4) 投入</b></p> <p>日本側：</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">長期専門家</td> <td style="text-align: right;">11名</td> </tr> <tr> <td>短期専門家</td> <td style="text-align: right;">52名</td> </tr> <tr> <td>研修員受入</td> <td style="text-align: right;">17名</td> </tr> <tr> <td>機材供与</td> <td style="text-align: right;">212,906千円</td> </tr> </table> <p>スリランカ側：</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">カウンターパート</td> <td style="text-align: right;">教官、他スタッフ</td> </tr> <tr> <td>歯学部経常経費</td> <td style="text-align: right;">約2億6000万ルピー</td> </tr> <tr> <td>教育病院経常経費</td> <td style="text-align: right;">約8,300万ルピー</td> </tr> </table>		長期専門家	11名	短期専門家	52名	研修員受入	17名	機材供与	212,906千円	カウンターパート	教官、他スタッフ	歯学部経常経費	約2億6000万ルピー	教育病院経常経費	約8,300万ルピー
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<b>2. 評価調査団概要</b>		
調査者	JICA スリランカ事務所 TEAMS (Pvt) Ltd.	
調査期間	2006年2月23日～2006年3月24日	評価種類：事後評価
<b>3. 評価結果の概要</b>		
<b>3-1. 評価結果の要約</b>		
<b>(1) インパクト</b>		
<b>(a) 上位目標の達成度</b>		
<ul style="list-style-type: none"> <li>- 学部レベルの教育の向上 <ul style="list-style-type: none"> <li>・歯学部の学部レベルのカリキュラムは改訂され、新しい統合的なセミナー型の授業が導入された。</li> <li>・統合的な基礎科学のクラスを設けることで、学生が、ヒトの健康と病気について全体的な理解を深めることができるようになった。</li> <li>・新たな教材や教授法が導入された。</li> </ul> </li> <li>- 患者診療の向上 <ul style="list-style-type: none"> <li>・年間の診察患者数は、1998年の40,000人から2003年以降約10,000人に増加した。</li> <li>・上記患者数は、臨床訓練のための必要規模を満たしている。</li> <li>・質の高いサービスが継続的に提供されている。</li> </ul> </li> <li>- 研究機能の向上 <ul style="list-style-type: none"> <li>・研究論文発表数や引用頻度も継続的に増加しており（それぞれ、2002年の38回・9回から、2004年の41回・27回）、研究の質の向上も継続的に見られている。</li> <li>・ワークショップやトレーニングへの参加も増加している。</li> </ul> </li> </ul>		
<b>(b) 他の正のインパクト</b>		
<ul style="list-style-type: none"> <li>- 研修で移転された顕微手術にかかる技術が、関心のある他の医師にも技術移転された。</li> <li>- 最終試験の合格率と成績優秀者が上昇していることに見られるように（それぞれ2002年の58.5%、21.1%から、2005年の77%、31.1%に上昇）、プロジェクト終了後も学生の成績は向上している。</li> <li>- 患者が高度かつ特殊な歯科治療を若干の費用負担により受けられるようになった。</li> <li>- 高いレベルの技術訓練を受けた卒業生および大学教員の評価が高まった。</li> </ul>		
<b>(c) 他の負のインパクト</b>		
<ul style="list-style-type: none"> <li>- 施設や人員の制約により、患者の待ち時間が非常に長くなっている。</li> </ul>		
<b>(2) 自立発展性</b>		
<ul style="list-style-type: none"> <li>・教育面 <p>歯学部の授業等の進捗など教育内容については、歯学部長の下で職員がモニタリングを行っており、大学教育は円滑に実施されている。訓練を受けた人が他のスタッフのトレーニングを行うことによって、全体としての技術の向上を図る体制ができており、高度な技術を身につけたことが報酬に反映されることにより、育成された人材が外部に流出せずに学内にとどまっている。また、大学が独自予算で実施する研修も継続的に行われている。</p> </li> <li>・患者の診療 <p>患者の診療は、大学のリソースを圧迫しないよう、保健省から機器や人材などの形式での財政的な支援を受けながら行われている。他の政府系の病院では扱っていない重症患者の診察等も行われており、大学や大学院の学生が最新の歯科治療技術を習得するための良い機会となっている。</p> </li> <li>・機材の維持管理 <p>歯学部や病院の機材の多くは修理や交換が必要な時期に来ている。しかし、修理のためのマニュアルがなかったり、維持管理のための予算も十分ではない状況があり、今後、継続的に機材を使用していくためには、維持管理のための予算確保が重要となる。</p> </li> </ul>		

### 3-2 プロジェクトの促進要因

歯学部が予算が限られている中で、歯科治療を行うために、少額の診療代を取ることが、労働組合の強い反対にも関わらず認められたことによって、歯学部生が、民間病院で行われているような治療技術を習得する機会を得られることとなり、技術レベルの向上につながっている。

### 3-3 プロジェクトの阻害要因

機材の維持管理のための予算が十分に確保されていないこと、および維持管理のための技術者がいないこと、が今後の自立発展性を阻害する要因として指摘される。

また、特に麻酔分野で歯学部には十分な訓練を受けた看護師がいないことが、患者の治療の質の向上の阻害要因となっており、診療のためのリソースをより保健省に依存する体制となっている。ペラデニア教育病院には歯学部と保健省との活動を適切に調整するための理事会のような組織がないことも問題の一つである。

### 3-4. 結論

ペラデニア大学における歯科教育については、カリキュラムや教授法の改訂、新技術の導入、臨床研修と指導の改善、などの取り組みにより、全般的に教育レベルの向上が継続的に図られている。職員の給与への政府からの資金が過去5年間に70%増加したことによって、訓練を受けたスタッフもほぼ大学に残っており、教育や治療サービスの質の維持が図られている。

### 3-5. 提言

短期的には、機材維持管理のための予算確保等の対応が必要である。

中長期的には、機材維持管理の技術者の確保、特殊歯科治療に対応するための歯科看護師の育成、歯学部と保健省との調整のための理事会の設置、が求められる。

### 3-6. 教訓

維持管理のための資金と人材の確保について、スリランカ政府の責任で実施することに関し、より具体的に、供与した機材の数パーセントの金額を年間の維持管理費用として最低10年間確保すること、等を文書を取り交わす等の方法により担保しておくことが望ましい

## Evaluation Summary

<b>1. Outline of the Project</b>	
<b>Country:</b> Sri Lanka	<b>Project Title:</b> Japanese Technical Cooperation Project for Dental Education at University of Peradeniya
<b>Issue / Sector:</b> Health care	<b>Cooperation Scheme:</b> Project Type Technical Cooperation
<b>Division / Divisions in charge:</b> Dept of Health care	<b>Total cost:</b> JPY 729,000,000
<b>Period of Cooperation:</b> 1998.2.1 – 2003.1.31	Partner Country's Implementing Organizations: University of Peradeniya Ministry of Higher Education / University Grants Commission and Ministry of Health
	Supporting Organization in Japan: Ministry of Health, Labor and Welfare, Ministry of Education, Concerned universities
Related Cooperation: Grant Aid "Improvement of Dental Faculty, University of Peradeniya"	
<p><b>1.1 Background of the Project:</b></p> <p>Democratic Socialist Republic of Sri Lanka filled an official request in 1997 to the Government of Japan for achieving optimum standard of factions of the Faculty of Dental Sciences and the Dental Hospital (Teaching) in Peradeniya, which were established under Japanese Grant Aid Project during the period of 1996 – 1998. Under the Grant Aid Project, the Faculty of Dental Sciences was upgraded and the project involved the construction of entirely new physical facilities and the provision of modern equipment for student teaching, patient care and research.</p> <p>Following the completion of the Grant Aid Project, the need for Project type Technical Cooperation Assistance arose to train staff members, academic and non-academic for proper utilization of the physical facilities made available under the Grant Aid Project.</p> <p><b>1.2 Project Overview</b></p> <p>The JICA Dental Education Project (1998 – 2003) at the Faculty of Dental Sciences, University of Peradeniya was aimed at the improvement of the health status of Sri Lankan people through the provision of technical training in education, services and research in the field of dental sciences.</p> <p><b>(1) Overall Goal</b></p> <p>To improve teaching, service and research in the Dental Faculty and Dental Hospital (Teaching) Peradeniya in order to promote oral health status of the people in Sri Lanka.</p> <p><b>(2) Project Purpose</b></p> <p>To strengthen the function and the capacity of the staff at the Dental Faculty and Dental Hospital (Teaching) Peradeniya.</p> <p><b>(3) Outputs</b></p> <p>2.1. To improve knowledge and skills of academic, technical and nursing staff.</p> <p>2.2. To develop the capacity to conduct research and continuing education programs for dental health personal</p> <p>2.3. To develop a system to ensure sound maintenance of physical facilities, equipment and instruments of the Dental Faculty and the Dental Hospital.</p>	

#### (4) Inputs (July 2002)

##### (a) Japanese Organisation

Input	Project Period
Number of Long term Expert	11
Number of Short term Expert	52
Number of Trainees received	17
Equipment	JPY 212,906,000

##### (b) Sri Lankan Organisation

Counterpart	Tutors, other staff members
Budget for Dental Faculty	Rs. 260,000,000
Budget for Education Hospital	Rs. 83,000,000

## 2. Evaluation Team

Members of Evaluation Team	JICA Sri Lanka Office TEAMS (Pvt) Ltd.
Period of Evaluation	2006.2.23 - 2006.3.24

## 3. Results of Evaluation

### 3-1. Summary of Evaluation Results

#### (1) Impact

##### (a) Achievement of Overall Goal

- Improvements in Undergraduate Teaching
  - Dental undergraduate curriculum was revised
  - A semester based modular course system was introduced in basic sciences
  - Integration of basic science subjects took place and Integrated teaching led to development of a holistic approach in the study of health and disease in man.
  - New teaching methods were adopted
  - Objective assessment was introduced in the basic sciences
- Improvements in Patient Care
  - Patients admitted increased from 40,000 prior to 1998 to around 100,000 since 2003.
  - Patient care maintained at 100,000 for adequate clinical training
  - Quality of service provided, such as provision of special dental appliances, microsurgery, cleft palate / lip correction continued
- Improvements in Research
  - Research communications and publications increased from 38 & 9 in 2002 to 41 & 27 respectively in 2004
  - Participation in workshops and training programs too increased

##### (b) Other Positive Effects

- Training received in micro-surgery was transferred to general surgeons interested in micro-surgical procedures
- The level of competency achieved at the finals improved, passes and classes increased from 58.5% and 21.1% in 2002 to 77 and 31.1% respectively in 2005
- Patients were able to receive special dental treatment at a nominal fee
- Training received in specialized procedures would enable dental surgeons passing out to become more lucrative and employable in the practice sector
- The image and financial status of academic staff improved very much after clinical

training

**(c) Negative Effects**

- Delays in attending to those seeking dental attention was inevitable due to limitation of resources in the Dental Faculty - Hospital Complex.

**(2) Sustainability**

**(a) Educational**

- Dean's Office staff under the Dean of the Faculty of Dental Sciences has been trained to monitor the progress in Dental Education via coordinators of programs and the Heads of the Departments. This enabled smooth functioning of the academic programmes conducted by the Faculty of Dental Sciences.
- Trained personnel trained others, helping further upgrading of technical and nursing assistance and continuation of activities
- Increased allocation as emoluments to academic and non-academic staff continued enabling retention of staff as much as possible.
- Self-funded courses continued to be conducted without burdening the dental faculty.

**(b) Patient Care**

- These services were run with financial inputs in the form of material, equipment and manpower from the Ministry of Health. Critically ill and deformed patients continued to be cared under the guidance of Dental Specialists. Dental appliances were provided to the needy after charging a nominal fee. This practice enabled students, both undergraduate and postgraduate, to become aware and proficient in modern methods of dental treatment, which otherwise wouldn't have been possible.
- Patients were able to get special investigations done after paying a nominal fee approved by the University Council. These investigations are of special nature and are not available in other hospitals.

**(c) Maintenance of Equipment**

- Funds available for their maintenance is meagre and is inadequate for repair work. Some equipment will soon be beyond repair and this means they will need to be replaced. But the cost of replacement will be many times more expensive than having them repaired at the due time. Funding will have to be found if Dental Education is to progress as intended.
- Not all the manuals necessary for their repair are available.

**3-2. Factors that have Promoted Project**

In order to carry out dental service functions in spite of poor budgetary allocation, the Dental Faculty recommended charging a small fee for the services rendered. This met with strong opposition from the government trade unions. Fortunately, the University Council upheld the recommendation of the Dental Faculty and gave covering approval to go ahead with its proposal. This to a certain extent made it possible to sustain the quality of teaching – service functions in the Dental Hospital.

**3-3. Factors that have Inhibited Project**

Important factors are insufficient funds for maintenance of equipment and lack of trained staff for repair. In addition, untrained nurses in the category of nurses in the Dental Faculty is a stumbling block in quality care of patients seeking treatment. This has made the Faculty more dependent on the Health Ministry.

**3-4. Conclusions**

There is a significant improvement in dental education in the University of Peradeniya

resulting from changes in curricula, instructional methods, introduction of new techniques, improved clinical training and supervision. Government funding available as staff emoluments increased by 70% in the last five years helping to retain most of the staff trained.

### **3-5. Recommendations**

In the short term immediate action should be taken to fund maintenance and repair work.

In the long term, action should be taken to train technicians and dental nurses required to support special dental procedures and also establish a Board of Management to coordinate the activities of Faculty of Dental Sciences and the Ministry of Health.

### **3-6. Lessons Learned**

At the time agreement was signed between the Governments of Japan and Sri Lanka, a clause should have been added that makes it mandatory for Sri Lankan Government to allocate certain percentage of the value of the equipment donated as annual maintenance expenditure for a period not less than 10 years.



## **Third Party Review**

Reviewer: Prof. Diyanath Smarasinghe  
Department of Psychiatry  
Faculty of Medicine, Colombo

Note: This final report was revised reflecting comments given in this third party review.  
Thus, some comments in this review are not applicable to the final version of the report.

### THIRD PARTY REVIEW

## of EX-POST EVALUATION REPORT ON JAPANESE TECHNICAL COOPERATION PROJECT AID FOR DENTAL EDUCATION AT UNIVERSITY OF PERADENIYA

### 1. Evaluation Framework

Issue	Rating
1. Time frame of evaluation study	B
2. Study team	B
<i>Comment</i>	

### 2. Data Collection (commences on following page)

## 2. Data collection and analysis

Issue	Rating
1. Evaluation questions	C
2. Data collection	C
3. Measurement of results	D
4. Examination of causal relationship	C

### Comment

1. The evaluation grid focuses on only one component of the 'Main Evaluation Questions' listed in the Terms of Reference (ToR). The ToR identified three main evaluation questions – i. Impacts, ii. Sustainability and iii. Questions specific to the Dental Education Project. The last item (iii) are *additional* questions as spelt out in the ToR. But the evaluation grid has chosen to focus only on the items in this *additional* component. The evaluation grid ignores the first two evaluation questions.
2. The data collected has not been quite in accordance with the evaluation grid provided, and has clearly gone beyond it. This is fortunate because the original grid did not separately focus on the first two evaluation questions.
3. The data or information collected about the achievement of the overall goal is not sharp enough. The objective of 'improving the *capacity of the staff*..' had to be analyzed and broken down to its chief components. Relevant information to verify achievement would then have become clearer.

Questionnaires were administered to academic staff and technicians, nurses and surgical assistants. The breakdown and analysis of their responses to the different items of the questionnaire are not provided, even as an appendix. Were the answers to the different items in the questionnaires calculated and analyzed?

Results relevant to the third evaluation question, (6.4 – 'Questions specific to the Dental Education Project') are given, strangely, *after* 'Recommendations to improve JICA's country programs (6.3)'. All of the work listed in the Evaluation Grid was about these ten questions, and to give 'Recommendations to JICA on improving their country programs' *before* presenting the results of these data is unsatisfactory.

Results on item 6.4 (j) are not presented.

Some tables (of the few presented) are untidy and not aligned correctly (e.g. on page 11, 17 and 18). Nor are they numbered.

Some figures in table on 'Allocation of staff' (p 17 and 18) do not tally with those on 'New cadre/ vacant positions' (p18). For example in Community Dental Health the first table shows a decline of three academic staff in 2005 compared to 2004 but the next table shows 'nil' vacant positions in this discipline in 2005. Do they count temporary staff too here?

4. Causal relationship to the project is assumed for the positive observations that are presented. This may or may not be justified.

### 3. Evaluation Results

Issue	Rating
1. Impact	D
2. Sustainability	B
3. Factors promoting sustainability and impact	C
4. Factors inhibiting sustainability and impact	D
5. Recommendations	C
6. Lessons learned	C
<p><i>Comment</i></p> <p>1. Impacts listed should together answer the question of <i>whether staff capacity has been strengthened</i> and if so in what ways and to what extent. The reader is <u>not</u> readily able to answer this question from the report.</p> <p>Items such as 'loss of trained staff' or 'inadequacy of funds for maintenance' are presented under the 'Impact' heading although they are more appropriate under sustainability.</p> <p>A steady increase in the percentage of student getting <i>classes</i> at the final BDS examination is given as a positive impact of the project (along with 'dental instruction' and patient numbers treated and tested) in the main text. Causality is attributed to the project – but the data shows a trend of improvement all the way from 1998 onwards. If the project is complemented for the increasing percentage of classes achieved in the final BDS, it should also be condemned for the trend of increasing failures from the year 2000 to 2004. The report does not comment on this at all although the data presented does show this slight adverse trend in failures too.</p> <p>The evaluation summary (in 5.1 page 28) claims that there was an <i>improvement in the number of passes</i> and classes in the final BDS. This claim about passes is a new one that first appears in the summary but not in the main text of the report. And it is probably false – unless the increase in 'number' has been despite the decline in percentage that passed. The only information given in the report is about percentages and that shows a decline, not an increase.</p> <p>3 Factors promoting sustainability and impact are not analyzed within the body of the text. There is a paragraph that simply appears in the Evaluation Summary – and that too is not a critical assessment.</p> <p>4 Factors inhibiting sustainability and impact are not analyzed within the body of the text. The sentence that appears in the text does not do justice the many other inhibiting factors that are elicited and described in detail in the main text. There are several inhibitory factors that are described in the text and their non-inclusion here is puzzling.</p> <p>5 It is a weakness that the recommendations (p 24) focus on just the equipment side of the project. There are other recommendations scattered elsewhere (p 13 and p 20) in the main text and this does not make life easy for the reader. The recommendations in the Evaluation Summary are not a fair reflection of the points in the main text, and give a skewed picture of the total recommendations made in the text. The reader is made to do a lot of work to glean the recommendations.</p> <p>6 A little more attention to this heading would probably have yielded more important lessons.</p>	

#### 4. Structure of Report

Issue	Rating
1. Writing manner	C
2. Presentation of primary data and utilization of figures	D
<i>Comment</i>	
<p>1. Although the language used is clear and correct, the organization of material is not helpful to the reader.</p> <p>2. The data gathered from questionnaires should have been included at least as an appendix. And they needed to be analyzed item-wise too! The little data that is presented in tables should have been more carefully aligned and presented in a way that aided assimilation. Tables are untidy and almost careless in format.</p>	

#### 6. Overall Review

Issue	Rating
1. Usefulness	C
2. Impartiality and independence	C
3. Credibility	C
4. Participation of partner countries	C
<i>Comment</i>	
3. Please see comment under 'Overall comment' at (6), below.	

#### 6. Overall comment

A generous conclusion is that, despite the weaknesses, the overall thrust of the report still reflects fairly the current status. But the reader has to assume many things.

I have examined critically the overall thrust and flavour, and feel that a fair picture is still conveyed. A much more convincing report could have been provided, with the information already gathered, had more effort been made to analyze and present the data properly. The authors do not seem to treat with enough respect their own data. So the conclusions come out as personal opinions not quite supported by the data. I have gone beyond this weakness and tried to estimate the validity of the opinions that are presented – and come to the conclusion that they are likely satisfactory. But this is not a very firm opinion.

## Table of Contents

### Evaluation Summary Sheets Third Party Review Table of Contents

	<b>Page</b>
<b>1. Background: Dental Education in the University of Peradeniya</b>	<b>1-2</b>
<b>2. Objectives of the Aid Programme</b>	<b>3</b>
<b>2.1. Grant Aid Project</b>	
<b>2.2. Project Type Technical Cooperation</b>	
<b>3. Overall Goal and Objectives of the Technical Cooperation Project</b>	<b>4</b>
<b>3.1. Overall Goal</b>	
<b>3.2. Project Objectives</b>	
<b>4. Evaluation Purpose</b>	<b>5-6</b>
<b>4.1. Assessing Impacts</b>	
<b>4.2. Assessing Sustainability</b>	
<b>4.3. Questions Specific to Dental Education Project</b>	
<b>4.4. Status of the Equipment</b>	
<b>4.5. JICA's Country Programme</b>	
<b>5. Schedule of Evaluation Activities</b>	<b>7</b>
<b>6. Evaluation Methodology</b>	<b>8</b>
<b>6.1. Strengthening Capacity of Staff of Dental Faculty and Dental Hospital</b>	
<b>6.2. Equipment Status</b>	
<b>7. Evaluation Results</b>	<b>9-29</b>
<b>7.1. Assessing Impacts</b>	
<b>7.2. Assessing Sustainability</b>	
<b>7.3. Project Questions Specific to Dental Education</b>	
<b>7.4. Effective Equipment Maintenance and Management</b>	
<b>7.5. JICA's Country Programme</b>	
<b>8. Recommendations to Improve JICA's Country Programme</b>	<b>30-32</b>
<b>8.1 Institutional Arrangement to Sustain Its Activities</b>	
<b>8.2. Board of Management for the Dental Hospital</b>	
<b>8.3. Post Training Evaluation for TCTP Trainees</b>	
<b>8.4. Maintenance of Equipment</b>	
<b>9. Conclusions</b>	<b>33</b>
<b>10. References &amp; Attachments</b>	<b>34</b>

## **Background**

### **Dental Education in the University of Peradeniya**

A Dental School was established in 1954 on a hillock referred to as Augusta Hill, bordering Dangolla and the Peradeniya - Kandy roads. This site originally belonged to Kingswood College, Kandy that housed a wooden two-storied building for hostellers. After the government acquired this land, this landmark wooden building with other additions became the birthplace of the newly established Dental School in Peradeniya.

At that time pre-clinical first year training was done in the Colombo Medical Faculty, as there was no such faculty in Peradeniya. This was followed by the balance three years of clinical training in the newly opened Dental School.

After the establishment of the Second Medical Faculty in Peradeniya in 1961 the pre-clinical training shifted to Peradeniya starting from 1964. From that time the Dental School became part of the Faculty of Medical, Dental and Veterinary Sciences. The Dean, who was part of the Medical School, administered it. This situation changed with the establishment of a new Faculty of Dental Sciences in 1986. Except for the change in the administrative structure, part of the teaching continued to be done by the staff of the Faculty of Medicine.

In the early years of dental education there were two academic departments. But one of these was suppressed and until 1981 there was only one single department. There was a single conglomerate cadre chair in dental surgery to take care of the whole of dental education. During 1981 – 1991 there were six departments established, giving way to continuous lobbying for expansion, partly satisfying the ever-increasing demand for curriculum diversity. Consequently upon the establishment of a separate Faculty of Dental Sciences, the Faculty developed self-reliance in both manpower and infrastructure.

However the infrastructure and equipment available at that time was unable to cater to the increasing demand for better quality dental education that was far behind time. It was at that time there was strong lobby for foreign funding to achieve this goal.

Japanese Government came to the rescue by providing just that and some more in the form infrastructure, equipment and technical training. With Japanese Aid provided through a Grant Aid package in 1996, a new facility was provided bordering Peradeniya - Kandy road in front of the main Medical Hospital named the Peradeniya Teaching Hospital, which was also an outright gift of the Japanese Government. The strategic location by the roadside gave the required publicity for better dental health care.

The golden jubilee in Dental Education was celebrated in the new Dental Faculty-Dental Hospital complex in 2004, almost at the conclusion of the 5 years Dental Education Project Aid in 2003, which was intended to improve dental education, services and research in the field of dental sciences. It is indeed a fitting moment to now look back at the impact the Japanese Government Aid had in improving Dental Education as per TOR of 3<sup>rd</sup> February 2006.

The aid given came in two packages, a 2 years Grant Aid Project from 1996 to 1998 for constructing an entirely new physical facility and provision of modern equipment for student teaching, patient care and research followed by 5 year Project Type Technical Cooperation Aid from 1998 to 2003 for improvement of health status of Sri Lankans through the provision of technical training in education, services and research.

The overall goal of the Technical Cooperation for Dental education was to improve teaching, service and research in the Dental Faculty and Dental Hospital.

Three years have elapsed since the conclusion of the above said grant and this study is to evaluate the overall impact of the Japanese Government Aid on Dental Education in Sri Lanka and its sustainability, as at 2006.

The close proximity of the Teaching Medical Hospital and the Dental Hospital did make an impact on the efficient use of personnel, equipment and material between them, whenever there was a demand for such use. Examples of such use were sharing of anaesthetists and blood bank facilities.

However, this did give rise to unseen problems, such as removal equipment from one institution to another and also non-availability of a defined budget for Dental Hospital activity. This was because of the fact that administration of both these institutions came under the Director of Peradeniya Teaching Hospital. Although there is a Deputy Director in charge of the Dental Hospital, the Dental Hospital is considered as another ward of the main hospital, thus reducing the importance given to dental health care service.

When preparing budget for health care in hospital, emphasis is given to number of beds. But it looks unreasonable when such a scale is used to measure dental health care service in the Dental Hospital, as the number of dental chairs is as important as beds in the hospital system.

There is some conflict with the main objective of the Japanese Aid given which is to give emphasis to Dental Education and provide adequate facilities for Dental Patient Care and Research. The fact that step motherly treatment is given when allocating government funds and material necessary for patient care in the Dental Hospital, reduces the emphasis placed on dental care.

With elapse in time maintenance and servicing of equipment provided in 1996 – 1998 is turning out to be a major problem. With no clear-cut arrangement between the Health Ministry and that of Higher education Ministry for mutual agreement in maintenance and servicing of equipment, deterioration of expensive equipment has set in.

## **2. Objectives of the Aid Programme**



## **Grant Aid Project**

Infrastructure facilities, complete with equipment was provided through a grant aid during 1996 - 1998, laying the foundation necessary for further enhancement of Dental Education.

The facilities provided included two separate building complexes, one **(P-1)** an administrative building comprising of offices, laboratories **(P-5,6)**, learning rooms **(P-3,4)** and a mini library and another **(P-2)** comprising of an OPD **(P-8)**, a ward **(P-7)**, operating theatres **(P-9)**, ICU, dental treatment centres, offices and laboratories **(P-11)** for investigation of patient samples.

## **Project Type Technical Cooperation**

To strengthen the capacity of academic, technical and nursing staff of the Dental Faculty training had to be provided through project type technical cooperation grant. This was accomplished during 1998 – 2003.

This provided training facilities to academic and non-academic staff ranging from a few months to five years, locally and in Japan. The training offered qualifications ranging from Certificate of proficiency to PhD.

### **3. Overall Goal and Objectives of the Technical Cooperation Project**

#### **3.1. Overall Goal**

The overall goal of the Technical Cooperation Project for Dental Education project was to improve teaching, service and research in the Dental Faculty and Dental Hospital.

#### **3.2. Project Objectives**

The project objectives were to strengthen the capacity of the staff at the Dental Faculty and Dental Hospital and thereby achieve the overall goal.

The major outputs anticipated in strengthening the capacity of the staff of the Dental Faculty and Dental Hospital were to improve the

- 3.2.1. knowledge and skills of academic staff.
- 3.2.2. capacity of technical staff.
- 3.2.3. capacity of nurses and dental surgery assistants.
- 3.2.4. management capacity of staff of Dean's Office, Core Group of the Dental Faculty, Deputy Director's Office and the Dental Hospital.
- 3.2.5. capacity for research.
- 3.2.6. capacity for continuing education programmes for dental health personnel.
- 3.2.7. capacity for sound maintenance of physical facilities and equipment of the Dental Faculty and Dental Hospital.

Terminal evaluation conducted by JICA personnel in August 2002, assessing the above outputs, concluded that the project had been efficiently operated with timely inputs mobilized by the Faculty of Dental Sciences and JICA.

Having completed 3 years since the termination of the Technical Cooperation Project, the task of TEAMS is to evaluate whether activities reported as having improved in the Terminal Evaluation continues to be so, if not why not and recommendations to overcome deficiencies if they exist.

The methodology used in evaluating the strengthening of capacity of staff will be dealt in 6.1.

#### **4. Evaluation Purpose**

The purposes of this evaluation are to study the status of Dental Education. It intends to

- 4.1. assess impacts.
- 4.2. assess sustainability.
- 4.3. answer specific questions relating to the dental education project as per TOR  
(Terms of reference for ex-post evaluation study).
- 4.4. specifically assess the status of the present equipment and its maintenance.
- 4.5. obtain lessons and make recommendations to improve JICA country programmes.

#### **4.1. Assessing Impacts**

This evaluation will seek to answer the following:

- 4.1.1. To what extent has the project's overall goal been achieved, since the time of terminal evaluation?
- 4.1.2. What positive and negative impacts have the project achieved beside what were originally intended?
- 4.1.3. Among positive changes made, how has the project,
  - 4.1.3.1. implementation empowered the target group economically and socially?
  - 4.1.3.2 contributed to the improved institutional capacity of the implementing agency?
- 4.1.4. Has the project,
  - 4.1.4.1. brought negative changes to the beneficiaries, including minority and vulnerable groups?
  - 4.1.4.2. negatively contributed to the promotion of environmental and social development?
- 4.1.5. Are there any external factors that influence the achievement of the project overall goal?

#### **4.2. Assessing Sustainability**

This evaluation will seek to answer the following:

- 4.2.1. Is the implementing agency continuing project activities?
- 4.2.2. Is the effect aimed for by the project (Project purpose / overall goal) being continually produced by this?
- 4.2.3. What are the impending and contributing factors for sustainability?

#### **4.3. Questions specific to the Dental Education Project**

- 4.3.1. Since the termination of the project, has sufficient amount of government budget been allocated to the faculty of Dental Sciences to cover its activities? Other than government budget allocation, has there been any measure to strengthen its financial basis (for example: income generation activities)?
- 4.3.2. What kind of institutional arrangement is made to sustain its activities (training courses etc.)? In case where some staff members leave the Faculty of

- Dental Sciences, is there any particular measure to effectively transfer their teaching and training skills to successors?
- 4.3.3. The curricula/syllabi and teaching materials were improved to some extent during the project cooperation period. Are these output still effective or applicable to the current needs? How have the teaching materials and curricula been improved since the terminal evaluation was carried out?
  - 4.3.4. Have adequate number of staff members been allocated to the Faculty of Dental Sciences management structure? Are vacancies immediately filled? If not, what are the effects caused by such prolonged vacancies.
  - 4.3.5. How are the Faculty of Dental Sciences resource personnel who were trained through the JICA project making use of their skills and knowledge?
  - 4.3.6. What are the constraints/difficulties faced by the Faculty of Dental Sciences in formulation of Board of Management for the Dental Hospital?
  - 4.3.7. In case where the Faculty of Dental Sciences has set out new courses other than those conducted during the project, how the new training courses are initiated, planned and delivered?
  - 4.3.8. What kind of academic development of the staff can be identified after the termination of the project?
  - 4.3.9. Have the participants achieved adequate knowledge and skills in the relevant disciplines after the completion of the TCTPs?
  - 4.3.10. What sort of post training evaluation for TCTP has been planned by the Faculty of Dental Sciences?

#### **4.4. Status of the Equipment**

The present equipment maintenance and management system will be scrutinized and its impact on sustainability of the continuous use of equipment will be assessed. This study will be useful for the effective implementation of similar projects in the future.

#### **4.5. JICA's Country Programmes**

The purpose is to identify unforeseen deficiencies that have arisen following project implementation and recommend possible ways to overcome them. This is dealt in detail under section 8.0. on recommendation.

## **5. Schedule of Evaluation Activities**

The following schedule of evaluation activities was carried out in a chronological order.

- 5.1 The four reports submitted by JICA on the Dental Education Project for the period 1998 to 2003 along with Terms of Reference for Ex-Post Evaluation Study on Japanese Technical Cooperation for Dental Education at the University of Peradeniya were studied and a brief visit to the Dental Faculty and its Teaching Hospital was made.
- 5.2 A brief statement of Japanese government aid given and its result in the form of buildings, equipment and training of manpower was made. Following this a visit to the JICA office in Colombo was made to clarify certain statements in the TOR was made and a programme of events culminating in the production of the final draft report was planned according to the time limit given.
- 5.3 After discussing the issues raised in the TOR and the information available from the statement prepared a grid was prepared identifying the appropriate indicators and data sources as per Ex-Post Evaluation Design Guide for Local Consultants. This was submitted to the JICA office on Friday the 3<sup>rd</sup> of March 2006 as decided at the meeting held with Dr. S. Serasinghe in JICA office on Thursday the 23<sup>rd</sup> of February 2006.
- 5.4 Questionnaires for relevant stakeholders were developed and administered. These comprised of Dean/ Faculty of Dental Sciences, Deputy Director /Dental Hospital and Heads, Academic staff, Technicians, Nurses and Dental Surgery Assistants of Faculty of Dental Sciences. In addition, interviews were conducted by the Team Leader with Dean/Faculty of Dental Sciences and Deputy Director of Dental Hospital to get a deeper insight into the problem of formulation of a Board of Management, for greater efficiency in total Dental Education.
- 5.5 A Bio-Medical Engineer a co-investigator of this study inspected the Dental Faculty and the Dental Hospital gathering information on the status of the equipment used. In order to get a clear picture of the status of the equipment photographs were taken using a digital camera. In addition, two technicians were interviewed that were available at the site.
- 5.6 Results obtained were analysed and answers to questions raised in the TOR were answered with illustrations and photographs.

## **6. Evaluation Methodology**

### **6.1. Strengthening Capacity of Staff of Dental Faculty & Dental Hospital**

The overall goal of the Technical Cooperation Project was to improve teaching, service and research in the Dental faculty and Dental Hospital through strengthening of the capacity of the staff involved as per objectives in 3.2.

As terminal evaluation of this project has already being accomplished in 2002, the methodology to be used will adopt a system where comparison will be made between the values obtained in 2002 and that of later years, namely 2004, 2005 and 2006, as and when such values are available. But when ever there is a situation, where early results available in 2001, 2000 etc are useful to understand the trend that follows in the study, such results will be included for evaluation and discussion of results.

The latest in the results available for this study from published data was restricted by the nature of institutional regulations governing such collections. For example the Annual Reports in the University are available only after they have been collected, compiled and audited by divisions such as Faculty Departments, Dean's Office, Financial and Statistics Units etc. Hence when the evaluation is carried out in March some of the audited figures for the previous year will not be available. Where as, if it were carried out in the second half of the year, such results would be available. In the absence of audited figures projected figures will be used, when available.

Published data in the form of Annual Reports, Annual Budget, Cadre Allocations etc. and results of questionnaires administered to stakeholders will be used in this study. In addition, information collected from interviews with a selected few Heads, Dean of the Faculty of Dental Sciences and Deputy Director of Dental Hospital was used for this study.

### **6.2. Equipment Status**

Following a request of JICA, a specialized study was undertaken by the Bio-Medical Engineer, ascertaining the status of equipment and their maintenance. Two technicians available at the site were interviewed. Both hadn't being trained in the care and maintenance of equipment. The two who were trained had left the institution.

Photographs of equipment that required attention were taken using a digital camera as it was felt that such presentations were more powerful than description.

## **7. Evaluation Results**

### **7.1 Assessing Impacts**

#### **(a) Teaching, Service and Research**

##### **Teaching**

Since the termination of the project in 2003, teaching has improved. Evidence for this is based on the following:

Ongoing curriculum development

Addition of new resource material

Employment of new teaching methods

Preparation to introduce objective type of assessment (Head / Basic Science)

**See 7.3. (c)**

##### **Service**

Hospital service continues to be maintained at the level it was in 2003. An increase in the patient number being treated is not anticipated as the infrastructure facilities provided has now reached the saturation point. It grew up from 40,000 admissions prior to 1998 to 100,000 in the last few years. It is maintained at that level.

**See 7.2 (a)**

Quality of service provided, such as provision of special dental appliances, microsurgery, cleft palate / lip correction continues. The number treated being limited by manpower and other resources available. Since the priority of the Dental Faculty is towards teaching increase in such facilities is not envisaged.

##### **Research**

Research continues with much more vigour after the return of trained academic staff from abroad. This is reflected in the increased number of research publications and communications.

**See 7.3. (h)**

#### **(b) Positive Impacts & Negative Impacts**

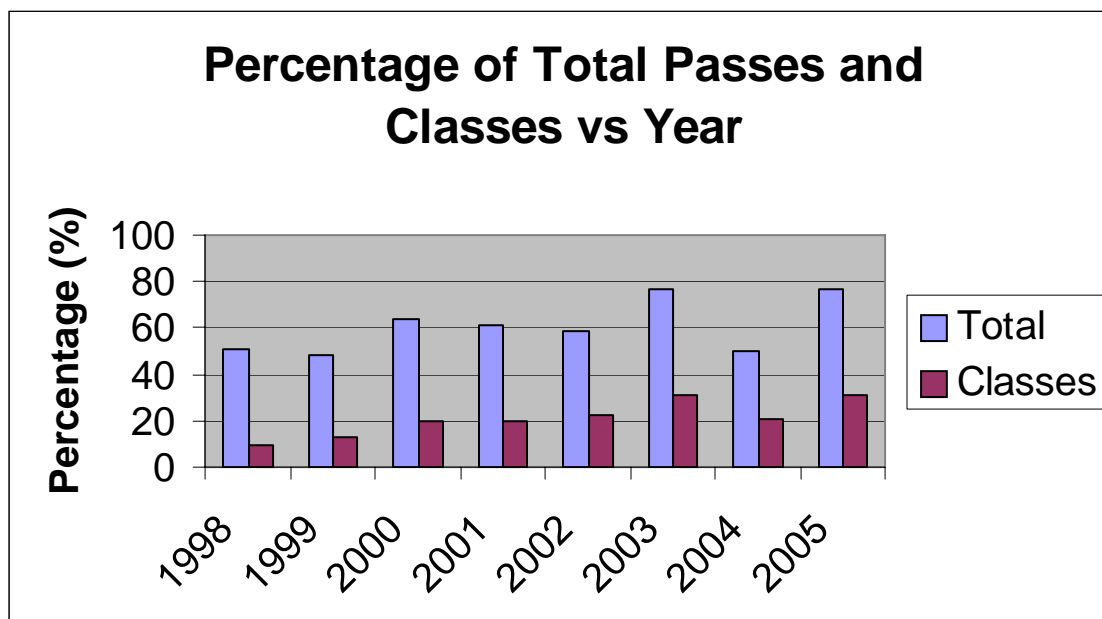
##### **Performance at the Final Examination**

The performance of students continued to be improved. This is a positive aspect. The percentage of passes and classes at the Final BDS examination has improved with improvements in the educational inputs.

**Table 1**  
**Undergraduate Performance**

**Percentage Total Passes and Classes in the Final Year – BDS Part II**

Year	1998	1999	2000	2001	2002	2003	2004	2005
Total	50.9	48.7	63.8	61.1	58.5	77.0	50.0*	77.0
Classes	<u>9.8</u>	<u>12.8</u>	<u>20.0</u>	<u>19.4</u>	<u>22.1</u>	<u>31.1</u>	<u>20.4*</u>	<u>31.1</u>



The percentage of ordinary passes is at the top of each column, whilst the Percentage of classes (*merit passes*) obtained is at the bottom underlined (Faculty Report / Deans's Office).

The percentage of passes and classes in the final examination has increased since 1998; the year infrastructure facilities were completed. With the strengthening of the capacity of the staff, during 1999 – 2003, further improvement is seen, showing a positive impact on Dental Education. However, when that of Year 2004 is investigated, the response is somewhat unexpected. If one was to consider the double intake (142) of students in 2000, which are the ones who took the final Examination in 2004, this is understandable, on the assumption that facilities had to be shared, both in terms personnel, material and equipment.



## **Double Intake**

This result does give indirect evidence that taking large number of students does have a bearing on the clinical training examined. On examining their Second BDS results it is found that influence of number on basic science training, which is usually conducted in relatively large number, is less affected. This means adequate small group training is essential to bring out the best of the students in their clinical learning. Therefore, when additional students are to be admitted it is necessary that adequate funding for the extra facilities necessary for clinical training should be provided well ahead of time, so that preparations could be made to lessen the negative impact on the dental education of those enrolled.

## **Dental Teaching Programme**

New manuals have been developed for instruction of practical in the basic sciences. This has resulted in better coordination between theory and practice.

A modular system of integrated semester type of instruction has been developed This is helping the students to integrate standard subjects learnt under modules. For example, Anatomy, Biochemistry and Physiology are integrated under common basic science modules.

New teaching material has been introduced. Handouts, books, multimedia presentation and problem-based tutorials have been added to the armoury of educational material. 88% of those who responded in the survey for academics have contributed new material after 2003.

Examinations are being made more objective. This is through preparation of MCQ type examinations that could be later elevated to problem solving type. Already banking of MCQ type questions has commenced.

Time spent on clinical instruction/ small group teaching has improved.

Due to intensive training given in surgery the number of lecturers required for Oral Surgery increased. This has resulted in new cadre position for Oral Surgery (See additional cadre/vacancies table).

The above described are positive aspects.

## **Staff Development**

The trained personnel, academic and non-academic, are in demand. Some have got promoted in their own categories, especially after postgraduate training, and now drawing higher salaries.

## **Academic**

Loss of trained staff has resulted in loss of work output. This is so with both academic and technical staff. In the case of academics, this loss has taken place no sooner they have

returned after their postgraduate training abroad. On inquiry it is found that academics are mostly from the minority community and are from the basic sciences. When the Heads are questioned for likely reasons for resignations, two common reasons given are that PhD doesn't give an advantage of a lucrative clinical practice and the other is being a member of the minority community places them at an disadvantageous position due to the on going civil disturbance in the North – East of the country (Personal Impressions)

### **Technical**

In the case of technical officers there is a dearth of trained personnel in the country and therefore their retention is based on the level of wages that could be offered to them. Private practice is limited in Kandy, whereas in Colombo there is high demand for them in the large private hospitals that are coming up. Unfortunately they can't be paid any higher wages within the University System (See under maintenance of equipment for further details)

Salaries paid in the University Sector for technical staff are far below that paid in the private sector. The fact that trained technical personnel are scarce and they are in big demand in the private sector, make them leave for greener pastures This has resulted in unexpected loss of trained technical officers in the Faculty of Dental Science. The above are an unforeseen negative aspect.

### **Additional Support from Health Ministry**

A positive aspect is that it has been possible to attract sufficient number of health personnel and medical supplies for the upkeep of the Dental Hospital. It has been a two way process. On one hand the Health Ministry is able to give employment opportunities to Dental Graduates, whilst Dental Faculty on the other hand is able to get health personnel and material necessary to run the Dental Hospital. University having a meagre budget will not be able to manage this large facility. This is a positive aspect.

### **(c) Empowerment of Target Group**

The academic community have access to lucrative private practice in view of their stature and training. In addition, the special clinical skills that they have gained as a result of JICA training have increased their demand for specialized skills in the private sector. This helps their retention in the country and continuation of their functions in the Dental Faculty. They too benefit socially through their specialized skills, as only a few such personnel could be found in the country.

Institutional capacity to train health personnel in special skills, such as microsurgery etc. is being done with financial help from external sources. In addition, TCTP programme is being continued with funding JICA. But this assistance is due to end in 2007.

Short-term self-funded courses conducted for Dental Technicians & Auxiliaries that were initiated during the JICA programme are being continued.

#### **(d) Negative Changes Brought to the Beneficiaries**

The main beneficiaries of this programme are students of the Dental Faculty, those that have undergone training courses conducted by the Dental Faculty and patients treated in the Dental Hospital. There are no known negative changes that could be considered significant that have resulted from implementation of the JICA project.

#### **(e) External Factors that Influenced Achievement of Overall Goal**

Government Trade Unions were up in arms when Dental Faculty wanted to charge a nominal fee for material supplied when preparing dental appliances. If this couldn't be carried out teaching service functions could have been jeopardized.

### **7.2. Assessing Sustainability**

#### **(a) Continuation of Project activities**

##### **Dental Education**

Dental education programmes are being continued without any problems. The outcome of the programme as witnessed by the BDS final year results indicate smooth progression.

This subject is dealt in greater intensity under "Questions Specific to the Dental Education Project" that will follow this section.

##### **Extended Education Projects**

All training programmes are continuing with the available resources. These include Technicians, Dental Auxiliaries, Micro Surgery and TCTP training Programmes

##### **Patient Care**

Since the opening of the new Dental Hospital patient admission has increased. Fortunately the Health Ministry has come in a big way to contribute towards increased patient care. The patient admission / sample testing has reached a plateau at 100,000. This number is sufficient to provide cases necessary for clinical training (Personal Communication / Clinical Heads). The infrastructure structure and man power is such that it is adequate to handle this number.

**Table 3**

**Patient Care – Patients Treated / Samples Tested**

<b>Department</b>	<b>2000</b>	<b>2001</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Community Health	---	12081	15422	16648	200
Oral Pathology	3550	2506	4010	3932	3513
Oral Medicine	---	---	31084	27582	26500
Periodontology	---	---	32010	---	46696
Restorative Dentistry	30853	32526	---	12982	10661
Oral Surgery	13885	16669	---	---	---
Prosthetic Dentistry	4786	4802	---	1443	---
Paedodontics	---	21936	23143	30962	---
Basic Sciences	179	---	---	---	---
<b>Total</b>	<b>52753</b>	<b>90520</b>	<b>105669</b>	<b>94549</b>	<b>94306</b>

These were extracts taken from the Annual Reports of the University of Peradeniya that were available with the Statistic Officer. Some of the information had not been furnished.

Health Ministry has provided a considerable input of personal and material for patient care. In the year 2006, Health Ministry's contribution has been 40 Dental Surgeons, 11 Anaesthetists, 42 Nurses and Rs.10m (already) contribution for consumables inclusive of hand pieces etc. (Personal Communication/DDDS)

It is essential to understand that the primary function of the Dental Faculty is to teach and therefore teaching shouldn't suffer at the hands of service. This is where Health Ministry has a role to play. Since the building space is limited it shouldn't be used to unnecessarily to overburden the quality of service function carried out. The service offered should be of the highest quality permitting the highest level of training of the Dental Surgeons passing out from Peradeniya (Dental training programme / Dean's Office).

**Sharing Resources in Dental Hospital**

In the allocation of the duties, Dental lecturers screen patients at the OPD from 7.30 a.m to 9.00 a.m. and direct them to respective units for treatment. It is at this juncture that special cases are selected for teaching purpose. Thereafter, Government Dental Surgeons take over the OPD serving the basic needs of the patients. There are 8 Government Dental Surgeons that work there at the OPD using the 4 dental chairs available. They take turns when working. This arrangement is not satisfactory and may require a different plan of action for greater efficiency.

## **Research**

A research culture has set in as the results in 7.3. (h) indicate. But this trend needs to be continued. For this research grants are necessary. The grants available in the University are small due to the fact there are more applicants for such grants. Political interests that stipulate the priority areas sometimes guide NSF and other local funding agencies when grants are given and this makes it hard for the researcher.

Currently research grants available in the country are meagre and therefore collaborative work or competitive large World Bank funded IRQUE type projects will be required to boost the image created in the faculty, both in terms of instruction and future research.

## **(b) Impending & Contributing Factors for Sustainability**

The most important issues relating to sustainability are trained staff, financial resources, maintenance of equipment and administrative structures.

### **Nursing Staff**

The nurses of the Dental Faculty don't have the type of training that exists among those in the government service. This is a drawback in the smooth functioning of patient care services. According to the survey conducted among the dental nurses (5), all of them have stated that they are unhappy about the facilities available to work efficiently. Four of them have requested for further help and one of them has asked for further training in nursing. Having untrained nurses could threaten the efficient handling of patients, as some of them require anaesthetization during certain dental procedures.

### **Trained Staff**

#### **Academic Staff**

The academic staff has been upgraded, knowledge and skills wise. The last of the JICA aided scholars returned after his postgraduate training in 2005 (JICA and Dental Faculty Reports). Their level of training achieved has been sufficient to continue with the programmes implemented in 2005 (Faculty Reports / Dean's Office). As there has been no significant losses reported among the staff in 2006 the programmes conducted before could be expected to continue without and problem.

#### **Non-Academic Staff**

A survey done among the available technicians (8), nurses (5) and dental surgery assistants (2) revealed that two technicians and two dental surgery assistants had undergone training under JICA project. The technicians had been trained in histopathology and plastination. Both of them were involved in training others in the faculty. As for the dental surgery assistants, only one of them was involved with the training of others. The reason given by the other for not being involved in training was overload of work involved. The contributions of the trained personnel will go a long way in continuation of teaching and patient care functions.

### **Financial Resources**

This particular question is dealt at length in 7.3. (a). The financial allocation made annually is sufficient for payment of wages and essential services, such as water, electricity, telephone etc. But when it comes to payment for consumables and maintenance, this is way behind the real requirements. As for consumables, an attempt has been made to recover part of the cost of making dental appliances by making a nominal charge from the patients. Now that University regulations are in force this practice will continue without hindrance from objecting parties, like the trade unions, who clamour for free health service that government promises.

### **Maintenance of Equipment**

#### **Funding for Maintenance**

The budgetary allocation for maintenance within the University is totally inadequate. Within an allocated budget for the whole of Peradeniya University it is difficult to expect increasing allocation for maintenance as equipment ages. The situation is very unsatisfactory.

Given below is funding that has been available for the past 5 years.

**Table 2**

**Dental Faculty Maintenance Expenditure (X Million SRL Rupees)**

<b>Year</b>	<b>Maintenance</b>
2002	0.32
2003	0.30
2004	0.31
2005	0.25
2006*	0.43

2006\* is the proposed

Some of the equipment beyond repair are cannibalised to repair others that could be put to good use. This is because of funding problems. Some spares are very expensive. The output of is bound to suffer sooner or later (See under equipment, sections 7.4. & 8.4.)

This has been the major obstacle in carrying this project forward. Unless the equipment are serviced and managed properly very soon quality Dental Education will be in the doldrums. This has been dealt at length in 7.4. and 8.4.

### **Administrative Structure**

The Dental Faculty has organized the administrative structure to carry out project development and plan implementation under the guidance of the Dean. This is working smoothly. But when it comes to the formulation of a Joint Board of Management for running of the Dental Hospital this is not so. This has been dealt in detail in 8.2.

### **7.3. Questions specific to the Dental Education Project**

#### **(a) University Contribution & Income Generation Activities**

#### **University Contribution**

**Table 4**

#### **Dental Faculty Recurrent Expenditure (X Million SRL Rupees)**

<b>Year</b>	<b>Total</b>	<b>Academic Emolument</b>	<b>Non Academic Emolument</b>	<b>Supplies</b>	<b>Maintenance</b>
2002	54.09	27.31	21.10	3.10	0.32
2003	58.40	28.89	20.59	6.76	0.30
2004	69.54	36.79	23.69	5.85	0.31
2005*	74.19	38.02	25.02	7.88	0.25
2006*	94.96	47.41	34.38	7.88	0.43

The above table does not display all expenses, only recurrent expenditure is shown.

2005\* & 2006\* are only budgeted estimates of expenditure. Recurrent expenditure includes payment of salaries to both academic and non-academic staff, supplies, maintenance and other recurrent expenses.

The emoluments of both academic and non-academic staff contributed nearly 86 – 90% of the recurrent expenditure. The expenditure on staff increased by nearly 70% from 2002 to 2006, a positive sign promoting retention of staff for continuation of dental education. But when figures for supplies and maintenance are considered the increase doesn't appear to favour laboratory and clinical training of dental students.

At the recent address of the Vice-Chancellor at the Annual General Meeting of Peradeniya University Alumni Association on 19th March 2006 it was revealed that University as a whole spends 83% on salaries, 12% on services (electricity, water, communication, cleaning etc.), 3% on maintenance and only 2% on supplies. Referring to the last two items he said it was grossly inadequate. In the case of the Dental Faculty this is even worse!

Most of the equipment now in use in the Dental Faculty is over 5 years old and are now reported to be breaking down. It is therefore essential to have a bigger budget for maintenance and purchase of new equipment to replace the ones that are already obsolete. It is to be appreciated that the present Dean of the Faculty of Dental Science has been able to convince the University authorities to purchase two standby pumps costing nearly

Rs.1.0M above their paltry supplies and maintenance allocation. The sewerage plant now in the 8<sup>th</sup> year in use hasn't been serviced since its installation, due to non-availability of manpower to attend to it (Personal communication/Dean, Dental Sciences).

In order to carry out dental service functions in spite of poor budgetary allocation the Dental Faculty recommended charging a small fee for the services rendered. This met with strong opposition from the government trade unions. Fortunately the University Council upheld the recommendation of the Dental Faculty and gave covering approval to go ahead with its proposal. This to a certain extent has been able to sustain the quality of teaching – service functions in the Dental Hospital, which unfortunately is not available in the government Dental Institutions. Further, this specialized service provided opportunity to the dental students to learn techniques that could be practiced by them in the private sector, which is currently enjoying lucrative business.

The government is experiencing difficulties in providing jobs to all those who are passing out annually from the Dental Faculty. This is partly due to the fact that initial cost of supplying essential equipment to start a dental health practice is very expensive, unlike medically qualified doctors. Provision of soft loan facilities to qualified dental surgeons would be a boost towards the establishment of private practice that will cater to those who can afford, thus reducing the burden on the Government.

### **Other Income Generation Activities**

#### **Revenue from Patients**

Income generation activities included supply of material for Periodontology, Orthodontology, Restorative Dentistry, Pathology, Paedodontology and Patient Records. Of these the last two are additional to what was practiced at the time of conclusion of the JICA project in 2003 (Annual Reports).

Special advanced procedures used in dental treatment, such as crowns and bridges, which are not available in other government hospitals, were carried out because of the availability of funds from income generation activities. Price wise the charge for special procedures were about 1/10 of the cost in private practice ensuring quality treatment to the general public (Personal communication/Dean Dental Sciences).

#### **Laboratory Investigations**

Special biochemical and pathology tests were done on outside samples for which a nominal fee was charged. This could be considered a national contribution, specially the Central Province, as these types of tests are not usually done in the private sector. These include tests for cancers whose early diagnosis may lead to successful treatment.

#### **Contributions from Non-Governmental Organizations**

Lions International recognizing the important role played by the Dental Faculty in health care has decided to donate supplies and equipment worth Rs. 1.0M each. The Dean who is also the Governor of this International Organization has been instrumental in impressing upon this organization to help in this venture (Personal Communication/Dean, Dental Sciences).



Due to the above on going activities we believe that new dental procedures introduced under project aid could be sustained.

## **(b) Institutional Arrangements to Sustain Academic Activities**

### **Tobacco Cessation Unit and Public Awareness Programmes**

A new unit has been established to take preventive measures to combat the tobacco menace, which is a primary cause of cancer. TV Programmes have been launched educating the public on oral health care. Public lectures to school children have been continued as in the past.

### **Training Courses**

#### **Third Country Training Programme (TCTP)**

A new unit has been set up to cater to activities related TCTP. A person from Dean's Office has been assigned to this project. The training offered is made possible by funding available from JICA, which ends in 2007. Currently there is no financial arrangement to sustain its activities beyond 2007.

#### **Dental Auxiliary Course**

Dental Auxiliary Course under the administration of a Director, accommodating 20 – 25 dental surgery assistants, is conducted over a period of 2 years. This is a self-funded programme and hence sustainable.

This type of trained assistants will be most useful for dental practitioners who wish to start their own private practice. This will reduce the burden on the government to employ dental graduates passing out.

#### **Dental Technician Course**

A 2-year Dental Technicians training programme is conducted for the benefit of those employed by the forces. They will be useful in preparation of dental appliances etc.

This too is a self-funded programme and hence sustainable.

Both these courses contribute towards sustenance of professional practice of dental surgeons trained by the Dental Faculty (Annual Reports).

## **Resignations**

### **Academic Staff**

Those who have resigned from the academic staff are those of the basic science departments that have gone abroad for higher research degrees and not clinically oriented. It is to be noted that most of them were from the minority community who are uncertain about their future. Those that have received advanced clinical training and have a lucrative private practice have remained behind. This may indicate that reasons for resigning may be more complex than uncertainty concerns of the minority. It has not

been possible to effectively transfer the skills of those who have resigned as they have done so before arriving in their respective departments (Annual Report).

### **Non-Academic Staff**

Technical staff is most important to maintain and repair equipment that are used in training programmes. When trained personnel leave it is difficult to replace their service with others who are recruited. This dealt in depth in section 8.4. (maintenance of equipment).

### **Transfers**

One of the non-academic staff, a trained technician went on transfer to Colombo in view of his family being in Colombo. Under the UGC rules they are in transferable service. (Questionnaire/Heads)

## **(c) Improvements to Syllabi / Curricula and Teaching Material**

### **Syllabi / Curricula**

A major change in the duration of the course from 4 to 5 years is envisaged. It is expected to produce well-trained quality dental surgeons who could practice advanced techniques. Already obsolete sections from the syllabi have removed and new ones added. Competencies in the national languages are being developed with the intention of improving communal harmony and also better understanding of the patients treated.

This same concern has been shown in the questionnaire administered on Dental Nurses, where a common request for bilingual proficiency (English and Tamil) has been made under the question, “what additional facilities will help you to work better in your profession”. Of the 5 nurses that responded, 3 have requested for the above for better communication with the patients.

### **Dental Education Unit**

A new unit for development of dental education has been established. It is expected to look into the prospects of developing new teaching methods and use of Internet for Dental Education and self-learning (Dean / Dental Science).

### **Teaching Material**

Departments have produced new manuals for practical training in accordance with the objectives of each discipline. They are used to reinforce theory in a practical setting.

New teaching material in the form of handouts, books, multimedia presentation and problem based case material were produced by 88% of the academic staff (Q 5.2. in the questionnaire to academic staff).

Their contribution towards curricula development increased from 53% in 2003 to 83% in 2006. This is significant change in the contribution towards upgrading of curricula (Q 5.1. (i) & (ii) in the questionnaire to academic staff).

(d) **Staff in the Management of Dental Education  
Allocation of Staff**

**Table 5  
Dental Faculty Staff  
Academic Staff / Non Academic Staff**

<b>Year</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005*</b>
Dean's Office - (Permanent)	02/30	02/30	01/33	02/26
(Temporary)	--/ --	--/ --	01/ --	01/ --
Basic Science - (Permanent)	16/22	16/22	16/20	14\16
(Temporary)	08 / --	08/ --	08/ --	04/ --
Oral Surgery - (Permanent)	09/13	09/13	09/13	09/11
(Temporary)	--/ --	--/ --	--/ --	02/ --
Oral Medicine & Periodontology - (Permanent)	15/ --	15/ --	15/ --	14/17
(Temporary)	-- /--	--/ --	--/ --	07/ --
Community Dental Health - (Permanent)	11/22	12/13	11/22	09/20
(Temporary)	-- / --	-- /--	--/ --	06/ --
Prosthetic Dentistry - (Permanent)	05/22	05/22	05/22	03/21
(Temporary)	-- / --	-- / --	-- / --	04/ --
Restorative Dentistry - (Permanent)	06/14	06/14	06/14	05/10
(Temporary)	-- / --	-- / --	-- / --	05/ --
Oral Pathology - (Permanent)	07/13	07/13	07/11	07/10
(Temporary)	-- / --	-- / --	-- / --	02/ --

2005\* represents the latest cadre provision that is likely to be implemented in 2006.

Under the Dean's Office there are six technicians and one electrician to attend to maintenance and repair of equipment. Two technical officers have already left the Faculty. These two were trained to do Electrical & Electronics and Air Conditioning repairs. Their loss is a great tragedy! One Technical Officer (Equipment Maintenance) is on no pay leave and therefore the Faculty is to recruit one person on a contract basis. This arrangement is not satisfactory, but is the best option left to keep the unit working!

**Table 6**

**Academic Staff and Non Academic Staff**

**New Cadre/Vacant Positions as at 2005\***

	<b>Academic</b>	<b>Non Academic</b>
Dean's Office	01/--	02 + / 03
Basic Science	--/01	--/05
Oral Surgery	01/--	01/01
Oral Medicine & Periodontology	--/01	01/02
Community Dental Health	--/--	--/02
Prosthetic Dentristry	-- / 02	01/01
Restorative Dentistry	--/01	01/04
Oral Pathology	--/--	--/--

+ One is for an electrician

The staff\* allocated by University for dental education has improved and has reached a satisfactory limit. But when senior trained staff goes on sabbatical there is no provision to compensate for their non-availability. The Faculty is making arrangement to have one Lecturer attached to the Dean's Office, so that his service could be used to cover up loss of work of those on leave. If allowed this will be a convenient way of compensating for loss of educational activity of those on leave.

The department of Oral Surgery is heavily loaded with surgical care of the seriously ill and deformed persons. The availability of time for student teaching – training is therefore limited. In addition, as the department is acclaimed as a centre of excellence for surgical training in the region it is most important that additional hands be made available for continuation of undergraduate and postgraduate training (both local and foreign). Heeding to this requirement an additional academic staff position has been allocated in the cadre for 2005.

According to the survey conducted among the Heads, the work force of academics at the time of survey for dental education varied from 55% to 80%, with an average of 65%, indicating the increase in responsibilities placed on those available for teaching.

**Vacant Staff Positions**

There are delays in filling of academic cadre vacancies. A survey conducted among the Heads attributes this to non-availability of qualified staff. In the year 2000 and before due to financial constraints, the University decided to freeze posts of retiring Professors and those that resigned whilst they were abroad. But this situation has now been rectified.

**Additional Positions**

The position for an air conditioning technical officer has been allowed. This is expected to improve the environment necessary for proper care of the ICU, operating theatre etc. and the efficiency of the work output of personnel working in that environment. However, resignations of the qualified technical staff are causing nightmares (Cadre Books 2005).

New avenues for servicing these continuously used equipments may have to be found outside the University system. Contractual agreements may be an answer. Another is a joint agreement with the Health Ministry for such help.

#### **(e) JICA Project Trained Resource Personnel**

##### **Skills and Knowledge**

PhD trained probationary lecturers who spent nearly 5 years in Japan were able to contribute towards improvement of dental laboratory practical and their research capabilities. They produced new practical manuals that were relevant to basic science training programme.

Those that followed short clinical training programmes of 3 – 12 months duration were able to improve their clinical skills and provide training to others. Some of the others who were trained included those from Japan itself. This was through Third Country Training Programmes. A laudable experience appreciated by even the donor country!

#### **(f) Formulation of Board of Management**

##### **Constraints**

The composition of Board of Management seeking participation of Dental Faculty and the Health Ministry has been an irritant. It is best to do away with participants who have a direct interest and also power play with numbers. The ones who are causing heartburns are the union leaders.

The Deputy Director is unable to take decisions without referring to the Director. The interests of the Director are towards the Peradeniya Teaching Hospital (PTH) and the Dental Hospital is considered a ward of the PTH. This attitude has to be changed, as the Dental Hospital is the showpiece of the region. Although the Dental Hospital is only 42 beds in strength it is also 145 chairs strong (Personal Communication/DDDS).

#### **(g) New Courses Commenced**

According to a survey among the academics, after 2003, 32% of them have been associated with initiation of new courses of studies, whilst 42% have been able to contribute as resource person (Q 6.1. & 6.2. in questionnaire to academic staff).

##### **Dental Surgery Assistants**

A 2-year course to train Dental Auxiliaries has been initiated. The trained personnel will assist practicing Dental Surgeons. It is self funded and initiated by the Dental Faculty. The faculty staff conducts the course.

##### **Dental Technicians**

A 2-year course initiated by the Dental Faculty train Dental Technicians that are employed by the forces. This too is a self-funded. The Technicians will be of assistance in making dental appliances that is up to date.

### Micro-vascular Surgery Courses

These are advanced courses tailor made to suit groups of individuals with similar surgical experience. They are of 6 weeks to 3 months in duration. These were sponsored by Japanese Dental Association and AFOC (Asian Fight for Oral Cancer). It has enhanced the capacity of senior surgeons (Personal Communication/Dean, Dental Sciences).

### (h) Academic Development after Cessation of Project

#### Promotion in Status

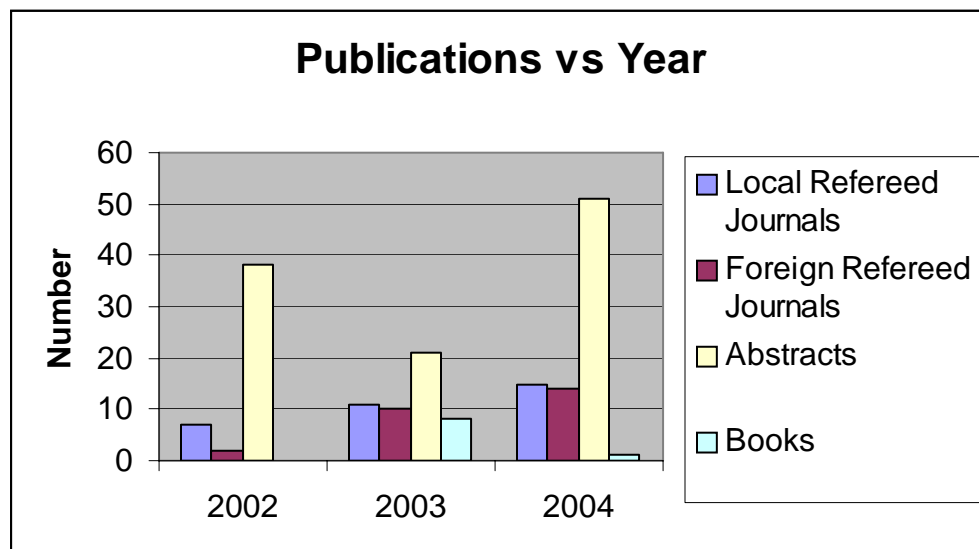
Academics in the Basic Sciences completed their PhD and were subsequently confirmed and promoted to the next higher grade.

#### Output of Research

The output of research as evidenced by the number of refereed papers and presentations at scientific sessions increased (see under research in assessing sustainability).

**Table 7**  
**Research and Publications**

Year	2002	2003	2004
Local Refereed Journals	7	11	15
Foreign Refereed Journals	2	10	14
Abstracts	38	21	51
Books	0	8	1



If one was to look at the research and published work, it is evident that there has been an improvement from 2002 -2004 period. Information for 2005 is not available from the Registrar's Office as the information it is due from the Heads and the Dean by end of March.

### **Further Education**

An interest to further enhance education was shown by increased participation in workshops, training programmes and curriculum development committees (Annual Reports).

Overall performance in teaching, training postgraduates, conducting new courses and patient care improved. This was the subjective opinion of the Dean and Heads of Departments who had other academics under their supervision (Results of survey conducted).

In the case of undergraduate teaching, 50% stated the performance was excellent, whilst the balance 50% stated performance as improved as opposed to satisfactory. In respect of postgraduate teaching all agreed that it had improved.

#### **(i) Achievements after Completion of TCTP**

Subjective assessment of those who participated reveals that there has been an improvement in knowledge and skills following completion of the training programme.

#### **Achievements of Knowledge & Skills**

Participants had prior knowledge of objectives, content and scheduling of the training programmes before participation. Therefore achievements and skills gained are in relation to those envisaged. Further, when one takes an unbiased look at the questions posed in the questionnaire, it is clear that it is an evaluation of the training programme conducted rather than achievements gained. Therefore, if one were to evaluate knowledge and skills gained through the questionnaire administered at the end of the programme, the results obtained are indirect. The evaluation is really a measure of its quality and applicability (See annexure for the specific questions).

These training programmes were carried out in 2003, 2004 and 2005 for periods of 4 – 6 weeks accommodating 10-12 participants. They are expected to be continued till 2007, for a 5 year period with funding from JICA.

The questions of some relevance when indirectly evaluating achievements are as follows:

- i) Evaluation of the training programme
- ii) Expectations of the training programme
- iii) Applicability of techniques and knowledge gained

On analysis of the questionnaires, relating to the three items i), ii) and iii) listed above the following results were obtained.

#### **i) Evaluation of the Training Programme – Items 2.1. & 2.2. in Section A**

Coverage of subject and depth was considered by all participants in the training programmes conducted in 2003 – 2005 to be just about right.

**ii) Expectations of the Training Programme – Item 13 in Section A**

**Table 8  
Training Programme Expectation**

<b>Year</b>	<b>Fully Met</b>	<b>Mostly Met</b>	<b>Somewhat Met</b>	<b>Not Met</b>
2003	36%	46%	18%	--
2004	44%	56%	---	--
2005	27%	73%	---	--

**iii) Applicability of the Techniques and Knowledge Gained – Item 14 in Section A**

**Table 9  
Applicability of Techniques and Knowledge**

<b>Year</b>	<b>V. Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>V. Poor</b>
2003	46%	27%	27%	---	---
2004	30%	50%	20%	---	---
2005	36%	64%	---	---	---

Results of ii) and iii) do indicate that participants perceive that they have gained the training expected and that they are of value in their profession. This may be an over estimate, but it does reflect a positive impact.

**(j) Post Training Evaluation for TCTP**

There has been no proper post training evaluation done. But a post evaluation has been carried out to determine the efficacy and outcome of the training programme, which is reported above (i).

**7.4. Effective Equipment Maintenance and Management**

For effective equipment maintenance and management the availability of the following are crucial.

- Equipment maintenance and management staff
- Budget for equipment maintenance and management
- Support from the top management
- Workshop facilities including Tools and testing/calibration equipment
- Service manuals and means of technical support

**7.4.1 Present Staff for the Equipment Maintenance and Management**

- At present only two technical officers are available at the dental faculty. Of them, one officer is responsible for the maintenance of civil works. No one is specially trained on the maintenance of medical equipment.



- Faculty of Engineering in the Peradeniya University assists in major breakdowns of equipment, but due to non-availability of funds they are also not in a position to deliver the expected results.
- Periodic inspection and preventive maintenance procedures are not performed at present due to lack of staff. Due to this reason, frequent breakdown of equipment can be noticed, especially dental chairs. **(M-2, 3)**
- The present maintenance staff has not been given training on medical equipment maintenance. Training of technical staff shall be considered as very important as the equipment down time can be reduced if the maintenance staff is competent.
- Those who had been given training at the initial stage of the project have already left the place as there are better opportunities in the private sector and overseas. The salaries are also very low for biomedical technicians/engineers in the government sector. Due to these reasons, it is very difficult to get the service of competent people for this place.
- Due to lack of staff and lack of competencies, only first line maintenance activities are performed for systems such as air conditioning, piped medical gas systems, vacuum system etc. Though they have been running for the last few with out major breakdown, there is a high risk to fail these systems due to lack of sufficient maintenance and attention. **(M-9, 10)**
- It was clear that the maintenance staff is not working with job satisfaction. Therefore there is a high risk of experienced maintenance personnel leaving this place, as happened in the past.

#### **7.4.2 Budget for Equipment Maintenance and Management**

- In the present system, a separate budget has not been allocated for the maintenance of equipment. For the purchase of spare parts and other urgent requirements, emergency purchasing is allowed, but the value shall be less than Rs.5, 000.00. If it exceeds Rs, 5,000.00, a request has to be made to the Dean of the Faculty and it takes very long time to get down the requirements. From past experience, it is clear that almost all parts are worth more than Rs.5, 000.00.
- Due to lack of funds, periodic maintenance has not been performed so far, which has affected seriously the performances of the equipment. There are certain parts in equipment (such as tubing, filters, worn parts etc.) that should be replaced periodically. Most of the equipments have deteriorated due to heavy use and performing beyond its originally specified capacity. **(M-4, 5,6,7)**
- The equipment now in use is more than 5 years old and frequent breakdowns can be noticed. Therefore it is essential to have a bigger budget for the replacement of obsolete equipment. Certain equipment need major overhauls.

#### **7.4.3 Support from the Top Management**

- Equipment maintenance has not been identified as a priority, which is common in almost every government institution in the country.
- Recruitment of sufficient staff for equipment maintenance should be given priority.

- The equipment maintenance and management system has not been developed and introduced, therefore technical staff follows their own ways. There is no methodology and no responsible officer to monitor maintenance performance.
- Necessary steps have not been taken so far to sign service agreement with the supplier, for the equipment, which cannot be maintained in-house. Most of the systems available at the dental faculty are running out of maintenance at present.
- Annual Budget for the purchase of spare parts and other requisites has not been planned so far.
- As this equipment has already been used for over 5 years the economical lifetime will exceed within another few years. Therefore it is high time now to plan for the replacement of the obsolete equipment, as sufficient attention has not been paid for this matter so far.
- Safety management and risk management has been totally neglected. As far as medico-legal aspects are concerned, this shall be considered very important.

#### **7.4.4 Availability of Workshop Facilities including Tools and Test/Calibration Equipment**

- The tools and test/calibration equipment provided under the grant aid project are still in good working condition.
- The faculty has also purchased few tools and equipment for the maintenance unit.
- There is no severe shortage of these items at present.
- The space provided for the Maintenance Workshop is not sufficient. **(M-1)**

#### **7.4.5. Service Manuals and Means of Technical Support**

- There are no service manuals for some equipment. Therefore it is very difficult for the service staff to attend to maintenance works.
- Operation manuals are available for almost all equipment.
- There are no local agents for some equipment. Therefore getting down spare parts and other after sales services are not possible.
- Certain companies have lost their dealership with their principles. The maintenance staff is not aware of their new dealers in the country.

#### **Other Problems that Require Urgent Attention**

- The capacities of washing machines are hardly sufficient to cater for the actual requirements. The available machines are domestic types and heavy-duty industrial type machines shall replace those. **(M-8)**
- The spare parts given under the grand aid project, with the equipment have been used for the past few years. There are certain parts that are out of stock at present. But there is no mechanism to get them down at the required time. There are few parts, which are rarely used.
- It was noticed that certain spare parts are not compatible with local standards. Therefore they have to be purchased only from the local agents. But the local agents charge extremely high prices for them. E.g. Corrugated tubes of the air compressor of the dental units, carbon cartridge of the distillers etc. **(M-3)**

- Sewerage system provided under the grand aid project has not been maintained properly as evident by the bad odour emanating from the plant
- The incinerator is not working properly due to lack of maintenance. The waste is manually burnt instead of incineration.

**7.5. JICA' Country Programme**

The Country programme has been reviewed in respect of institutional arrangements to sustain its activities, management of the Dental Hospital, post-training evaluation for TCTP and maintenance of equipment. This is dealt in the next section 8 devoted completely to this aspect.

## **8. Recommendations to Improve JICA's Country Programme**

### **8.1. Institutional Arrangement to Sustain Its Activities**

#### **Training**

Nurses who are already employed by the Dental Faculty are ill equipped to handle patient care requirements. It is recommended that they be recruited either from the Health Ministry or the present set of dental nurses be given a proper training.

#### **Research**

Adequate institutional arrangements have been made to sustain activities such as teaching and patient care. But when it comes to research, grants available within the University system it is meagre and could be possibly used as "seed money". It is unable able to strengthen the research capacity of academic staff. Therefore additional funding has to be met through other local and foreign agencies. This requires professional preparation of research applications for such grants. This objective could be met by conducting workshops for preparation of grant applications. Another alternative is to work in collaboration with others who are already in the arena of established research.

### **8.2. Board of Management for the Dental Hospital**

There are teething problems associated with the formulation of a Board of Management for the efficient running of the Dental Hospital. At the time of infrastructure development there was no place for the Director of the Dental Hospital, a Health Ministry administrative official to be housed in the Dental Hospital. Since Health Ministry was a key player in supplying personnel, equipment, consumables and drugs in the running of the hospital this became a sensitive issue when the issue of formulation of a Board of Management arose. However, currently with the new Dean of the Faculty of Dental Science in place this issue has got mellowed down, with amenities necessary for Director of Dental Hospital being partly met. But there are trade union activists who have in the past got involved with issues such as charging patients for material supplied. Therefore, in my opinion it is best to have such a board limited to few personnel who are the key players in the administration structure.

The Dean will be the Chairman of the Board and the Director will act as the Deputy Chairman. In the absence of the Chairman the Deputy Chairman shall preside. There will be mutual understanding between the Dean and the Director. They will work in harmony for improving Dental Education (undergraduate & PGIM trainees etc.) and patient care. Repair and maintenance of equipment will be a joint effort of both. If the proposed arrangements succeed, then additional staff members could be co-opted, without jeopardizing the activities of the Board of Management.

To improve communication between them an internal line will be made available. All information of mutual concern will be shared. Annual Budget will be prepared

in consultation with both parties. Charging of fees for sustenance of specialized services will be the duty of the Dean through the University Council and this will be included in the Memorandum of Understanding to be signed by the two parties, the Ministry of Higher Education and the Ministry of Health. This could be a later arrangement after a trial period.

The Board shall consist of the Dean as the Chairman and Director / Dental Hospital as the Deputy Chairman. Others in the Board shall be the Assistant Bursar and Assistant Registrar from the Dental Faculty and Accounting Officer and Administrative Assistant from the Dental Hospital. Others could be co-opted depending on the issues involved. It is important that the current Deputy Director be elevated to the position of Director / Dental Hospital and sufficient powers vested in her to prepare budget and staff allocation etc. for running of the Dental Hospital.

### **8.3. Post Training Evaluation for TCTP Trainees**

It is recommended that a new questionnaire be prepared, that is capable of eliciting the adequacy of knowledge and skills gained by the TCTP participants at the end of the training programme. This should be administered at the conclusion of the training programme and a year later.

The first evaluation shall give information about the knowledge and skills gained as perceived by the participants. The second one administered a year later shall give a true evaluation of the knowledge and skills achieved in relation to the ground situation in the respective work place. Information from both these sources will be helpful in preparing similar programmes in the future. Further, it may even give a further chance to those that have already being trained to undergo further training at their own expense, if such a facility could be provided.

Further, support from JICA may be necessary if this programme is to be continued beyond 2007, unless Dental Faculty is able to attract financial support from a yet to identify non governmental organization.

### **8.4. Maintenance of Equipment**

- Maintenance staff shall be recruited immediately. They shall be given comprehensive training on maintenance and management of existing equipment. This shall be arranged periodically for the better outcomes. The number of staff required shall be calculated according to the value of assets maintained. Value of assets maintained by a technician shall be approximately Rs.25million.
- An Engineer's supervision is recommended for the equipment maintenance and management, at least part time, or otherwise, Faculty of Engineering of Peradeniya University shall be given the responsibility in this regard.
- Maintenance management system shall be developed including assets, management, periodic inspection and preventive maintenance procedures, breakdown maintenance procedures, maintenance record keeping system, spare parts management, productivity monitoring etc. A computerised equipment maintenance management system will be more effective.

- The equipment, which cannot be maintained in-house satisfactorily, shall be outsourced. Service agreements shall be signed with the local agents for the service and maintenance of that equipment. But the in-house staff shall closely monitor their maintenance performances.
- At the equipment planning stage, appropriate technologies shall be selected rather than selecting the best technologies available. The equipment shall be compatible with local environment/local standards and be maintainable at a reasonably low cost. Operational costs also need to be considered at the planning stage.
- A separate budget shall be allocated for the maintenance and management of equipment. The amount shall be at least 5% of the total assets maintained. In addition, attention shall be made for the replacement of obsolete equipment.
- Service and maintenance manuals shall be provided for all equipment. These manuals should be got down from the local agents of respective equipment manufacturers.
- Safety and risk management procedures shall be implemented. As far as medico-legal aspects are concerned, this will be very important.
- The existing washing machines shall be replaced by heavy-duty industrial type washing machines.
- Major overhaul is required for most of the systems including air-conditioning, sewerage system and incinerator.
- At the planning stage, all the stakeholders should actively participate and the contribution of biomedical engineers and technical personnel at the design stage shall be considered very important in order to minimize future problems of this type.
- A standby generator shall be supplied especially to cater for the critical area such as operating theatres and ICUs.

## 9.0. Conclusions

- (a) The training of academic and non-academic staff has resulted in improving dental education, patient care and research. Dental curriculum has been revised and new teaching methods implemented. Special skills have been imparted in the clinical training programmes. Short and long term training programmes have been launched for lecturers, senior surgeons, junior dental surgeons (PGIM Trainees), technicians, and dental auxiliaries etc. Some of these courses have contributed towards upgrading and establishment of specialised services such as micro vascular surgery, tooth implementation etc.
- (b) Dental auxiliaries and dental technicians training programmes could uplift the private sector by providing the necessary support staff to carry out special procedures that are scarce. This could also be an incentive for the newly passing out graduates to join the private sector and be a lesser burden on the government that is finding it difficult to financially support the Faculty of Dental Science in its activities.
- (c) Tobacco cessation and public health awareness programmes have been launched and this may result in reduction in misery in those who are likely to be affected by dental caries, gum disease and even oral cancers.
- (d) Japanese Technical Cooperation Project has been able to help in the upgrading of Dental Education in Sri Lanka. But in the case of equipment care the stakeholders have not been able to manage them properly.
- (e) The introduction of new equipment to the dental faculty has improved the quality of the intended service delivery. Although modern and relatively sophisticated equipment have been introduced in large quantity, the capacity of maintenance of the equipment and the physical facilities has never caught up with the trend, leading to a highly risk situation of deteriorating service quality with the aging of equipment. As far as sustainability of the project is concerned, priority shall be given to establish effective and efficient maintenance management system.
- (f) There is a serious lack of awareness of the importance of the contribution of effective equipment management towards the goal of better healthcare delivery services. The decision makers always assume that the implementation of an effective maintenance management system is always costly and not affordable. But it is noteworthy that the cost of not implementing an effective maintenance system will be much higher than having such system. Because non-availability of maintenance system leads to early dysfunction of equipment, high down time, low quality results, safety problems etc.

## **10. References and Attachments**

### **References**

01. Ekanayake A. Perspective on Dental Education at Peradeniya. Chapter 7, The University System of Sri Lanka
02. Programme Budget. University of Peradeniya, 1998 to 2006
03. Cadre Book. University of Peradeniya, 1998 – 2005
04. Annual Report. University of Peradeniya, 1998 – 2004
05. JICA Terms of Reference (TOR)

### **Attachments**

06. List of Tables and Figures
07. Questionnaires developed: Annexure 1 – 4
08. Questionnaire administered on TCTP participants
09. Map
10. Photographs – Infrastructure Facilities: P-1 to P-11  
– Equipment Maintenance: M-1 to M-10
11. Evaluation Grid
12. Preliminary Report of JICA Funded Projects – Team Leader



## **List of Tables and Figures**

		Page
Table 1	Undergraduate Performance	10
Table 2	Dental Faculty Maintenance Expenditure	13
Table 3	Patient Care	14
Table 4	Dental Faculty Recurrent Expenditure	17
Table 5	Dental Faculty Staff	21
Table 6	New Cadre and Vacant Positions	22
Table 7	Research and Publications	24
Table 8	TCTP Training Programme Expectation	26
Table 9	Applicability of Techniques and Knowledge Gained	26

**Questionnaire for Heads of Departments**

(Circle or write the appropriate answer to each of the questions)

1. Name of the respondent: Mr. / Ms.

.....

2. Department:

3. Status: Lecturer / Senior Lecturer / Associate Professor / Senior Professor

4. Have you undergone training through JICA: Yes / No

If yes, please answer the following:

Name of the training programme / programmes .....

Training received: Certificate Course / Diploma / MSc / MPhil / PhD or Other  
(specify):

Type of training: Clinical Training / Laboratory Based Training / Teaching or Other  
(specify): .....

Duration of training: (Years ..... Months..... Weeks .....) )

Country / Countries of training: Japan / Sri Lanka / Other Country (specify)  
.....

5. Academic staff from 2003 to 2006

5.1. Academic staff employed

Cadre	Existing Staff		Vacancies
	At Work	On Leave	
2003			
2004			
2005			
2006			

5.2. Has there been a long delay (more than 1 year) in filling the academic posts?  
Yes / No

5.3. If yes, likely reason:

1. No suitable qualified person
2. Delays in advertising
3. Delays in processing of applications

6. Staff trained under JICA Project: (From 1998 – 2003)

	<b>Academic</b>	<b>Technical</b>	<b>Nursing</b>
Total No. Trained			
No. of Individuals Resigned			
No. of Individuals Transferred out of the Department			
No. Remaining in your Department (As at March 2006)			

6.1 Any loss in efficiency resulting from resignations / staff transfers in:

- (i) Dental teaching: Yes / No
- (ii) Dental laboratory services: Yes / No
- (iii) Patient care: Yes / No

7. Have there been adequate measures taken to compensate losses from resignation / staff transfers? Yes / No

7.1 If yes are there training programmes to transfer skills of the trained to the untrained staff of the department?

- (i) Supervised training of the untrained staff (personalized): Yes / No
- (ii) Conducting short-term training programmes / workshops etc. (Group): Yes / No
- (iii) Other (specify if any) .....

8. Curricular / syllabi revision:

8.1 Has there been a revision of curricular / syllabi in your department after 2003:  
Yes / No

8.2 If yes, state the change:

.....  
.....

8.3 Was there any new teaching material introduced? Yes / No

8.4 If yes, state what they are:

.....

9. Your perception regarding level of contribution of the JICA trained personnel

9.1. Academic staff

9.1.1. Teaching dental undergraduates: (Excellent / Improved / Sustained)

9.1.2. Training postgraduates: (Excellent / Improved / Sustained)

9.1.3. Research: (Excellent / Improved / Sustained)

9.1.4. Patient care: (Excellent / Improved / Sustained)

9.1.5. New training programmes: (Initiated / Not Initiated)

9.2. Technical staff

9.2.1. Maintenance of equipment: (Excellent / Improved / Sustained)

9.2.2. Motivation to use modern equipment: (Excellent / Improved / Sustained)

9.2.3. Efficiency in use of modern equipment: (Excellent / Improved / Sustained)

9.3. Nursing staff

9.3.1. Patient handling: (Excellent/ Improved/ Satisfactory)

9.3.2. Support given to clinical staff: (Excellent/ Improved/ Satisfactory)

9.3.4. Dedication for work: (Excellent/ Improved/ Satisfactory)

10. Formation of Board of Management (BM)

10.1. As the Head do you feel that your department has contributed in a big way in  
patient care  
in the Dental hospital. (Yes/No)

10.2. If yes, state your contribution .....

10.3. In your opinion, where is the maximum opposition to formulation of BM?  
.....

10.4. In your opinion, how will formulation of joint BM improve the following?

10.4.1. Dental teaching.....

10.4.2. Patient care.....

10.4.3. Research.....

11. Have you or department initiated new courses / training programmes after the conclusion of the JICA project in 2003? (Yes/No)

11.1 If yes, please fill in the boxes below.

<b>Name of the Course</b>	<b>Duration (M/w/d)</b>	<b>No. of Participants (Local/Foreign)</b>	<b>Name of the Person who Initiated the Programme</b>	<b>Whether Recipient of JICA Training. (Yes/No)</b>

12. Achievements of all academic staff members after the completion of JICA project in 2003

12.1. Acquisition of higher qualifications

<b>Name</b>	<b>PhD/MPhil/MSc/PG Diploma/Certificates etc.</b>

12.2. Promotion to higher grades / special awards (please specify)

Name	Professor/Associate Professor/Senior Lecturer/Lecturer or Special Awards

13. Have you or any of your academic staff members followed TCTP training program? (Yes/No)

If yes, please fill the boxes below.

Participants Name	Name of Training Programme	Its Impact on Performance (Excellent / Improved/ Satisfactory)

14. Funding for Dental Faculty after 2003

14.1. Cadre provision

	2003	2004	2005	2006
<b>Academic Staff</b>				
<b>Technical Staff</b>				
<b>Nursing Staff</b>				
<b>Others (state)</b>				

14.2. Financial provision

	2003	2004	2005	2006
<b>Equipment:</b>				
<b>Consumables:</b>				
<b>Others (state, if any):</b>				

15. Fund raising activities of the Dental Faculty from 2003 to 2006

15.1. Earnings from services rendered

	2003	2004	2005
<b>For Supply of Dental Material</b>			
<b>For Special Tests / Lab Investigations etc.</b>			
<b>Others (state):</b>			

16. Grants from outside donors

16.1. Research grants

Donor Agency	Amount 2003	2004	2005	2006

16.2. Other donations

Donor	Amount	Material	Equipment
<b>2003</b>			
<b>2004</b>			
<b>2005</b>			
<b>2006</b>			

17. Scholarships and Fellowships (2003 to 2006)

Donor Agency	Sponsorship Award
<b>2003</b>	
<b>2004</b>	
<b>2005</b>	
<b>2006</b>	

This questionnaire was also served on the Dean, Faculty of Dental Sciences.

**Questionnaire for Deputy Director – Dental Hospital (Health Services)**

1. Name of the respondent:
2. Position:
3. Have you undergone training under JICA project? Yes / No  
If yes, please state
  - 3.1. Type of training received:
  - 3.2. Duration:
  - 3.3. Name of the training programme:
4. Contribution of the Health Ministry towards
  - 4.1. Undergraduate dental teaching: Yes / No  
If yes, please state
 

	Resource Persons & Number	Material Yes / No	Equipment Yes / No
4.1.1. For Pre-clinical			
4.1.2. For Paraclinical			
4.1.3. For Clinical			

(Give examples of material & equipment used)
  - 4.2. Postgraduate dental teaching: Yes / No  
If yes, please state
 

	Resource Persons & Number	Material Yes / No	Equipment Yes / No
4.2.1. For Postgraduate			

(Give examples of material & equipment used)
  - 4.2.2. Are the postgraduate trainees under you (Health Ministry)? Yes / No
  - 4.2.3. Are they PGIM trainees? Yes / No
  - 4.2.4. What are the degrees / certificates given?
  - 4.2.5. Number under your care in
 

	2003	2004	2005	2006
	-----	-----	-----	-----



4.3. Patient care

4.3.1. Do you admit patients directly? Yes / No

4.3.2. Do you contribute towards patient care admitted through Dental Faculty? Yes / No

If yes, please state contribution/s for year 2006

4.3.2.1. Number of dental surgeons

4.3.2.2. Number of anaesthetists

4.3.2.3. Number of nurses

4.3.2.4. Material

(Give examples of material provided)

5. Please state the role of Dental Faculty, as you perceive in providing dental services to patients admitted directly through the Health Ministry.

5.1. Referrals:

5.2. Others:

6. State the relationship between health ministry and ministry of higher education in

6.1. Patient care:

6.2. Dental education:

7. Describe the contribution of the Health Ministry in 2005/2006 to

	Dental Faculty Hospital		Govt. Dental Hospital
Location			
Dental Surgeons	Yes/No	No.	No.
Nurses	Yes/No	No.	No.
Technical Staff	Yes/No	No.	No.
X-ray Equipment	Yes/No		Yes/No
Dental Equipment	Yes/No		Yes/No
Consumables	Yes/No		Yes/No
Drugs	Yes/No		Yes/No

8. Is there a Board of Management jointly with the dental faculty to run patient care service?

- 8.1. (a) Government managed Dental Hospital: Yes / No  
(b) Dental Faculty managed Dental Hospital: Yes / No

8.2. If not, what are the constraints that prevent formulation of such a board?

8.2.1. Administration: Yes / No

Dean	Deputy Director	Yes/No
Assistant Bursar	Accountant	Yes/No
Assistant Registrar	Administrative Officer	Yes/No
Other (specify)		

8.2.2. Non administration (specify) :

8.3. If a common Board of Management is to be formed what recommendations will be useful?

**Questionnaire for Technicians / Nurses/Dental Surgical Assistants**

(Circle or write the appropriate answer to each of the questions)

1. Name of respondent: Mr / Ms -----

2. Department / Division / Unit:

3. Status / Grade:

4. Have you undergone training through JICA: Yes / No

If yes, please answer the following:

4.1. Name of the training programme / programmes: -----

4.2. Level of training: Certificate / Other (specify) -----

4.3. Type of training:

(a) Repair & Maintenance / Programming / Standardising / Measurement

Others (specify) -----

(b) Describe the type of specialized training you had in nursing:

-----

4.4. Duration of training: (Years ----- Months ----- Weeks-----)

4.5. Place of training: Japan / Sri Lanka / other (specify) -----

5. Progress made after 2003.

5.1. Any promotion received after training: -----

5.2. Additional duties / responsibilities undertaken: -----

6. Did you take part as a resource person in training / teaching activities: Yes /No

If yes, please answer the following:

6.1. Name of the course: -----

6.2. Duration: (Months ----- Weeks ----- Days-----)

6.3. Type of participant trained (state): -----

7. Any other contribution (not mentioned above) you have made after undergoing training:

7.1. Dental education:

7.2. Patient care:

7.3. Research:

7.4. Others:

8. Are you satisfied with the facilities you have to work efficiently in your place of work?

Yes / No

If not, please answer the following.

8.1. State the facilities that are deficient that prevent you from working efficiently.

-----

8.2. In your opinion what other additional facilities will help you to work better?

-----

8.3. Can you please explain why these facilities were not provided before.

-----

9. If you were given a chance to organize your place of work to work efficiently and smoothly, list the actions you would take.

(a) -----

(b) -----

(c) -----

(d) -----

**Questionnaire for Academics**

1. Name of the responder :- Mr./Ms.....
2. Department :-
3. Status :- Lecturer/Senior Lecturer/ Associate Professor/ Senior Professor
4. Have you undergone training through JICA :- Yes/No
  - 4.1. Name of the training programme/ programmes :-  
.....
  - 4.2. Training receive :- Certificate Course/ Diploma/ MSc/ Mphil/ PhD or Other (specify)
  - 4.3. Type received : Certificate Training/ Laboratory Based Training/ Teaching or Other (specify) :.....
  - 4.4. Duration of training : (Years .....Months.....Weeks.....)
5. Curricular/ Syllabi revision :
  - 5.1. Have you contributed in revision of curricular / syllabi in your department :
    - (i) From 1998 to 2003? Yes / No :
    - (ii) From January 2004 to March 2006? Yes / No.
    - (iii) If yes,
      - a. Subject / subjects .....
  - 5.2. Have you produce new teaching materials : yes/No.  
  
If yes, state what they are :
    - (a) Handouts (b) Books (c) Multimedia Presentations
    - (d) Other (specify).....
- 6.1. Have you initiated new courses training programmes after the conclusion of the JICA project in 2003 (Yes/No)

6.2. Are you a resource person of a new course/ Training programme conducted by dental faculty? (Yes/No)

6.3. If yes, Name of the course/ Training Programme :

6.4. Are you a course coordinator of a any Course/Training Programme conducted by dental faculty (Yes/No)

6.5. If yes, Name of the course/ Training Programme:.....

7. Please indicate your involvement in following area :

7.1. Teaching dental undergraduates (Yes/No)

7.2. Training postgraduates (Yes/No)

7.3. Research (Yes/No)

7.4. Patient care (Yes/No)

7.5. New Training Programmes (Yes/No)

8.1. Have you acquired any higher qualifications/ received promotions to higher grades after 2003? Yes/No

8.2. If yes please specify:

(i) PhD/MPhil/MSc/ PG Diploma/ Certificate/Other.

(ii) Professor/Associate Professor/ Senior Lecturer/ Lecturer  
.....

(iii) Special awards (Please specify) .....

## QUESTIONNAIRE FOR TCTP PARTICIPANTS

- (A) Training Topics
- (B) Topics On General Matters
- (C) Others

### (A) TRAINING TOPICS

1. Did you get information on the objectives, content and schedule of your training/study program before coming to Sri Lanka?

Yes/No

If your answer yes, was the information sufficient?

Sufficient/Insufficient

If your answer is insufficient, what kind of information did you need?

.....

.....

.....

2. How do you evaluate your training/study program on each of the following items?

- 1) Coverage of subject
  - i. Too broad
  - ii. Sufficient
  - iii. Too narrow
  
- 2) Depth
  - i. Too deep
  - ii. Sufficient
  - iii. Not deep enough
  
- 3) Logical order of topics
  - i. Good
  - ii. Fair
  - iii. Poor

4) Relationship of each topic to the objectives of your training/study program

- i. Good
- ii. Fair
- iii. Poor

5) Balance of time allocation among lectures, discussions, exercises, and observations

- i. Good
- ii. Fair
- iii. Poor

If your answer to the last item (5) is **fair** or **poor**, how did you find the amount of time allocated to each of the following items?

	Too much	About right	Too little
Lectures	.....	.....	.....
Clinical	.....	.....	.....
Practical	.....	.....	.....
Discussions	.....	.....	.....
Observations	.....	.....	.....
Others	.....	.....	.....

3. What was the most beneficial and useful topic in the program?

.....  
.....  
.....

4. If any topics were to be added to the program, what should they be?

.....  
.....  
.....



5. If any topics were to be eliminated from the program, what should they be?

.....  
.....  
.....

6. How do you evaluate the presentations by the lecturers in your training/ study program?

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

7. How do you evaluate guidance and directions given by lecturers on each of the following occasions ?

Clinicals

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

Practicals

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

Discussions

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

Observations

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

Others

- i. All of them were good
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

If your answer is (Many of them were poor) or (All of them were poor), please specify the reason(s) an example.

.....

.....

.....

8. Regarding the common lecture series

1. How did you assess the lecture series?

- i. All of them were poor
- ii. Many of them were good
- iii. Fair
- iv. Many of them were poor
- v. All of them were poor

2. Did topics were covering a wide area.

- i. Too broad
- ii. About right
- iii. Too narrow

Your comments on common lecture series.

.....

.....

.....

3. If any topic/s were to be added to the common programme what should they be?

.....  
.....  
.....

4. If any topic/s were to be eliminated from the common programme what should they be?

.....  
.....  
.....

9. How do you evaluate the following items?

9.1. Printed material

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very Poor

Write your comments

.....  
.....  
.....

9.2. Training/Study equipments-

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very Poor

Write your comments

.....  
.....  
.....

9.3. Clinical sessions

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very Poor

Write your comments

.....  
.....  
.....

9.4. Lecture discussions

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

Write your comments

.....  
.....  
.....

9.5. Consumables

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

Write your comments

.....  
.....  
.....

9.6. Field work

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

Write your comments

.....  
.....  
.....

10. How do you assess the duration of your training/study program?

- i. Too long
- ii. About right
- iii. Too short

If your answer is (Too long) or (Too Short), please specify the reason(s) and suggest an appropriate duration

.....  
.....  
.....

11. How did you find the intensity level of your training/study program?

- i. Too leisurely
- ii. About right
- iii. Too hard

12. How do you evaluate the general administration and management of your training/study program?

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

13. Were your expectations of this Program met?

- i. Fully met
- ii. Mostly met
- iii. Somewhat
- iv. Not met

14. How do you rate the applicability of the techniques and knowledge you have obtained through this Training/Study program in your country?

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

**(B) TOPICS ON GENERAL MATTERS**

1. Before you left your country, did you receive sufficient information on your flight arrangements, visa application, orientation for arrival at an airport in Sri Lanka etc?

Yes/No

2 (1) How do you evaluate the hotel accommodation you were provided?

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

Any comments regarding hotel accommodation

.....

.....

.....

(3) What do you think about the transport provided to and from hotel: any comments regarding transport

- i. Satisfactory
- ii. Fair
- iii. Average
- iv. Poor
- v. Very poor

Any comments:

.....  
.....  
.....

3 (1) Did you receive medical treatment during your stay?

Yes/No

(2) How do you evaluate the medical services made accessible to you?

- i. Satisfactory
- ii. Fair
- iii. Average
- iv. Poor
- v. Very Poor

3. How often did you have a language problem in communicating with Sri Lankan people outside your training/study program?

- i. Often
- ii. Sometimes
- iii. Rarely

4. Do you think the amount of allowances paid by JICA was sufficient?

- i. Completely sufficient
- ii. Reasonable
- iii. Insufficient

5. Do you think briefing on allowances, accommodations, medical services, etc. was appropriate?

Appropriate/Inappropriate

If your answer is inappropriate, please specify the reason(s)

.....  
.....  
.....

6. About the meals – Lunch and Dinner

1. Did you have problems about Lunch ?

Yes/No

If “Yes” please specify

.....  
.....  
.....

2. Did you have problems about Dinner?

Yes/No

If “Yes” please specify

.....  
.....  
.....

7. Before your training /study program started, did you participate in the general orientation program.

Yes/No

If your answer is yes,

(1) How do you evaluate it?

- i. Very good
- ii. Good
- iii. Fair
- iv. Poor
- v. Very poor

8. Did you participate in any of the social programs such as Sri Lankan traditional culture program, or sightseeing?

Yes/No



If your answer is yes, were they interesting?

- i. All of them
- ii. Some of them
- iii. Non of them

What was the most interesting program for you?

.....  
.....  
.....

**(C) OTHERS**

1. How much was your understanding of Sri Lanka deepened?

- i. Very much
- ii. To some degree
- iii. A little
- iv. Unchanged

2. (1) What kind of overall impression for Sri Lanka did you get from your stay here?

- i. Very favourable
- ii. Favourable
- iii. Fair
- iv. Unfavourable

If your answer is very favourable or favourable please explain

.....  
.....  
.....

(2) What kind of overall impression for Japan did you get from your stay here?

- i. Very favourable
- ii. Favourable
- iii. Fair
- iv. Unfavourable

If your answer is very favourable or favourable please explain

.....  
.....  
.....

3. In one word, how would you describe your impression of Sri Lanka?

.....  
.....  
.....

4. What is the biggest pleasant memory of your stay in Sri Lanka?

.....  
.....  
.....

5. What gave you the biggest trouble during your stay in Sri Lanka?

.....  
.....  
.....

6. What are you going to take to your family and friends as souvenirs of Sri Lanka?

.....  
.....  
.....

7. In your view, what kind of further international cooperation does your country (or community) need? (Please focus on human resource development)

.....  
.....  
.....

8. How do you understand the selection process of you for this programme among candidates in your country?

- [1] Priority of the subject area
- [2] Seniority/position of the candidates
- [3] Priority decided upon the date of your application for overseas training
- [4] Candidates were recommended by some senior persons
- [5] Your achievements in the subject area
- [6] Decision of the Government
- [7] Unknown procedure
- [8] Other

Please write your comments if any regarding the selection procedure

.....  
.....  
.....

9. Any other comments

.....  
.....  
.....

## **A Preliminary Report of the JICA Funded Projects**

### **Two-Year Grant Aid**

This was specifically for the purpose-providing infrastructure for purpose, teaching, research and patient care.

There are certain outstanding issues in the case of infrastructure. Some of these have already been dealt, such as overflowing rain gutters. But there are three that deserve comment.

1. The sewage treatment plant has not been maintained properly as evident by the bad odour emanating from the plant at times and oozing out of untreated sewage material from the concrete covers of the sewerage system.
2. Toilets haven't been provided with facility to drain water that may have spilled either during use or during mopping up operation. The tradition of village folks is such that wetting of the floor during toilet use is common. This was common complaint!
3. The space left for ventilation between the upper wall beam and the roof cover has become a nesting place for pigeons resulting in their excreta being splashed over the corridor floors. This could lead to health problems, as was witnessed in the University Senate building where over time the pigeon excreta became a breeding ground for mites that attacked the occupants of the building.
4. Some of the equipment brought for research and teaching were left unattended for extended period of time. This is understandable. When the persons who ordered equipment are away their use and maintenance is at risk of becoming neglected. A way out of this problem could be to have collaborators, research students working with the equipment or to lease the equipment to other research workers who could use them profitably.

### **Five Year Project Type Technical Cooperation**

Having provided the infrastructure and equipment the next step was to see that facilities were utilized maximally. This required specialized training. These included training of academic and non-academic staff. There were three different types of training provided. Variables were place of training, type of resource persons used and the persons trained.

1. Based in Japan: One was to send probationary lecturers on study leave for 3-4 years to Japanese Universities to do their postgraduate studies (PhD) specializing in their field of study. There was another where those academic staff entitled for one-year sabbatical leave spent their time profitably gaining technical and clinical experience. Then there was another where staff was sent for special clinical and technical training for shorter periods.
2. Based in Sri Lanka: The second one was where Japanese experts came and trained our staff locally for long and short periods of time.
3. Based in Sri Lanka and Abroad: Third was the Third Country Training Programme where participants of a third country were being trained using resource persons from Japan, Sri Lanka and other countries. These were generally of short duration and the training provided was specific in nature.

The 7-year programme was envisaged to provide short term, medium term and long-term goals. The onus of the first two was the responsibility of the donor agency, the Japanese government, whilst that of the third was that of the recipient, namely the Faculty of Dental Sciences.

The short term programme was intended to provide the infrastructure and equipment, whilst the medium term programme was intended to provide the additional and specialized training necessary to maximally utilize the facilities for enhancement of dental education, research and patient care. The long-term goal was the continuation of the status achieved with much vigour and enthusiasm and further progress in all aspects.

The achievement of the latter is based on the continued support of the University, the government and other agencies in sustaining what has already been achieved in the form of development and further enhancement of facilities for greater contribution towards dental health care, the ultimate goal!

As for greater contribution towards dental health care, one must take into consideration the thorny issue of cooperation between the Dental Faculty and the Health Ministry. If this could be amicably sorted out the patient care and referral system could be improved further.

### **Collection of Basic Data to Answer Issues Raised in TOR**

The TEAM had access to four reports of JICA No. 98-40, 98-27, 01-07 and 02-19 that set out the scenario for preparation and implementation of a Japanese government funded project for improvement of dental education in Sri Lanka. The last of them was a mid term progress report, 6 months before the project ended.

TEAM had preliminary discussion on the 23<sup>rd</sup> February 2006 with Dr. S. Serasinghe at the JICA Office and had certain statements in the TOR clarified. There was a request that a GRID be prepared and submitted to the JICA office by Friday 3<sup>rd</sup> March 2006. Thereafter short meetings were individually held in Peradeniya with Dean / Faculty of Dental Sciences, Head / Basic Sciences, Deputy Director Dental Services / Ministry of Health and Acting Bursar to understand the questions and concerns raised by JICA.

Thereafter a grid was prepared according to the TOR, outlining the methodology that was going to be used in the investigations and this was faxed and a hard copy handed over at the JICA office on the scheduled date.

Questionnaires have being developed and scrutinized to ascertain answers to questions raised by JICA

### **History of Dental Education in the University of Peradeniya**

A separate Faculty of Dental Science was established in 1986, after being separated from the Faculty of Medicine in the University of Peradeniya. From the beginning it followed a subject-based curriculum, similar to the one that was adopted by the Faculty of

Medicine. Basic Science department was born in 1994 bringing together preclinical subjects Anatomy, Dental Anatomy, Biochemistry and Physiology under one Head. Similar changes were seen among other paraclinical and clinical departments. This was an attempt at economizing on the meagre financial and staff resources that were available at that time.

### **Basic Sciences**

With the construction of new buildings and provision of new teaching aids, in the form of equipment and multimedia, there was resurgence of interest in developing a more meaningful integrated form of teaching-learning-testing, in terms of time management of the previous taught subjects and also their integration to a certain extent. This saw the development of semester based modular curricula in the basic sciences in the latter half of year 2000. Subjective viva voce examinations which had been used earlier for testing knowledge and skills, were replaced with more objective type assessments. These included both theory and practical. The availability of equipment gave ample opportunities to the students to apply what they had learnt in theory into practice.

Quality assurance programme conducted in 2005 to assess the performance of Basic Science department by an independent body of academics selected by the University Grant Commission gave the highest rating, indicating their level of performance in the University system. This was in terms of teaching-learning, research and service functions. The paraclinical and clinical departments are due for evaluation in the year 2006.

### **Clinical Sciences**

Improved facilities in the clinical departments, in terms of space, trained qualified staff and latest modern equipment enabled students to have more time for practicing clinical skills and also in learning the latest methods of treatment. This certainly will enable the graduates passing out from the Dental School to be competent in areas which otherwise wouldn't have been possible.

Private practice is gaining importance in dental health care, partly due to non-availability of sufficient government treatment centres and facilities. Some exposure to dental family practice may have a role to play when finding suitable avenues for employment. In the case of medical training family practice is already included in the curriculum and is expected to give the future medical graduates gainful employment opportunities.

### **Students**

At the very beginning of Dental education in 1954 the intake of students was limited to about 15. With increase in the use of refined foods and sugar dental caries began to raise its ugly head over those of innocent healthy children. Very soon the demand for Dental surgeons began to increase. Today the number seeking Dental education after A-Level examination stands at 75. The infrastructure and teaching-learning facilities necessary for this intake of students have been provided with Japanese Aid.

The final year results obtained by dental students over the period 1998 – 2004 when reviewed show a progressive improvement in performance indicating that provision of adequate facilities through Japanese Aid has shown a positive effect.

### **Hospital Recurrent Expenditure**

#### **Hospital Recurrent Cost (X Million SRL Rupees)**

1998	09.84
1999	22.61
2000	14.65
2001	18.10
2002	18.10
2004	38.00# ?

(Personal Communication /DDDS)

2004# doesn't include salary expenditure

In the case of patient care, it is observed that number handled was around 40,000 before the Dental Faculty moved out of the old premises. This has now increased to nearly 100,000 by 2004. This is a positive effect.