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THEME OF THIS ISSUE

**SECOND REVOLUTION IN
MEDICAL EDUCATION**

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Sl. No.	Contents	Page No.
1	Leading Article The four wheel of the second revolution in Graduate Medical Education Dr. Santosh Kumar	1
2	Editorial 1: Handheld P.C. - A world in your palm Dr. K.R. Sethuraman	2
3	Editorial 2: MDG and HRH - the new mantras for educators Dr. K.R. Sethuraman	2
4	Project Report 1: Use of Multiple Choice Questions (MCQs) test at the end of lecture session. Dr.N.R. Vishnu Prasad	3
5	Project Report 2: Integrated Teaching for MBBS students. Dr. Vijaya V. Mysorekar	4
6	Quiz Competitions: A Novel Method of Teaching and Learning Dr. P.S Baji	6
7	Training of Trainers: Our Experience Dr. (Mrs.) H.K. Shah	6
8	The Evolution of better Medical Educator Dr. M. Anthony David S. Kumar	6
9	Letter to the Editor: Dr. L.Vijayalakshmi	8
10	Book Reviews	9
11	Educational Projects of 49th National Course	10

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LEADING ARTICLE

THE FOUR WHEELS OF THE SECOND REVOLUTION IN GRADUATE MEDICAL EDUCATION

(Dr. Santosh Kumar, Director-Professor and Head, Dept. of Urology, JIPMER, Pondicherry-605 006)

INTRODUCTION

A revolution is a great change over a short period. There have been two revolutions in medical education. The first revolution occurred at the beginning of the 20th century and the second revolution is occurring at the beginning of the 21st century.

THE FIRST REVOLUTION IN GRADUATE MEDICAL EDUCATION

The first revolution in graduate medical education started in the last part of the 19th century and continued through the early part of the 20th century. This revolution dealt mainly with the "structure" of the curriculum of the graduate medical education such as orderly sequencing of pre-clinical, para-clinical, clinical and internship phases. Abraham Flexner published his now – famous survey of these revolutionary changes in 1910.

(See NTTC Bulletin Vol.11.1; March 2004)

THE SECOND REVOLUTION IN GRADUATE MEDICAL EDUCATION

The second revolution in graduate medical education started in the last part of the 20th century and is now underway in the early part of 21st century. This revolution is far wider and deeper in its sweep than the first revolution in graduate medical education. It is concerned with both structural and functional aspects of the curriculum of the graduate medical education. The ongoing changes of the second revolution in graduate medical education are reviewed in the September 2000 supplement of Academic Medicine.¹ This review reports curricular information from 130 medical schools (118 in the US and 12 in Canada). Each medical school report is organized under the following 10 heads.¹

1. Curriculum Management and Governance Structure.
2. Office of Education
3. Budget to Support Educational Programmes
4. Valuing Teaching
5. Curriculum Renewal Process
6. Learning Outcomes
7. Changes in Pedagogy
8. Application of Computer Technology
9. Changes in Assessment
10. Clinical Experiences

THE FOUR WHEELS OF THE SECOND REVOLUTION IN GRADUATE MEDICAL EDUCATION

From the same report,¹ four areas of great changes can be identified and I call these the Four Wheels of the Second Revolution in Graduate Medical Education.

THE FIRST (TEACHING & LEARNING PROCESS)

Salient changes in pedagogy or teaching / learning methodology are listed below:

- ✧ Use of small group discussions
- ✧ Use of tutorials
- ✧ Accessing of library by students for directly getting information
- ✧ Communication skills learning
- ✧ Learning of ethical issues
- ✧ Use of standardized patients
- ✧ Contact with real patients throughout the course
- ✧ Use of longitudinal study of patients and families
- ✧ Learning in the context of communities

THE SECOND (APPLICATION OF INFORMATION TECHNOLOGY)

Salient changes in computer technology applications are listed below:

- ✧ 24 hour access to computer for students
- ✧ Delivery of course syllabi, text-books, class notes, histology slides and patient data through computers
- ✧ Use of e-mail to communicate with students
- ✧ Learning evidence based medicine and literature search skills
- ✧ Self directed learning
- ✧ Research activities

THE THIRD (ASSESSMENT)

Main changes in assessment methods are listed below.

- ✧ Use of standardized patients
- ✧ Use of peer assessment
- ✧ Use of objective structured examinations
- ✧ Use of computer for delivering examinations
- ✧ Use of formative assessment for learning.

THE FOURTH (CLINICAL EXPERIENCE)

Main changes in clinical experiences provided to graduate students are listed below:

- ✧ Patient interactions starting in the first week of the first year
- ✧ Longitudinal study of patients and families
- ✧ Learning in outpatient clinics and community centres.

- ✧ Learning from community physicians
- ✧ Learning in nursing homes, hospices & prisons
- ✧ Starting of free clinics and homeless shelters by students
- ✧ Attending to the whole person in clinical encounters
- ✧ Learning from standardized patients
- ✧ Understanding medical ethics & domestic violence
- ✧ Working in teams
- ✧ Treating the poor and the homeless
- ✧ Intercultural education

FOOD FOR THOUGHT

It is time to reflect and decide whether we choose to be mere spectators or we choose to be active players in this ongoing drama of the Second Revolution in Graduate Medical Education!

REFERENCE:

1. Anderson MB (Editor and Compiler). A Snapshot of Medical Students' Education at the Beginning of the 21st Century: Reports from 130 Schools. Academic Medicine. Vol. 75, No.9, September Supplement, 2000.

ANNOUNCEMENT

GOLDEN COURSE

50th National Course on
Educational Science & Technology
is scheduled from
21st Feb – 2nd March 2005.

JIPMER will subsidise lodging and
learning resources.

Travel and Boarding costs have to be
borne by the participants or
their sponsoring institutions.

Admission is restricted to the first
24 applicants (not exceeding
three per college).

For further information and
application please send email to :
nttc@rediffmail.com or krs@jipmer.edu

EDITORIAL 1:

Handheld P.C. – A world in your palm:

(Dr.K.R. Sethuraman, Director-Professor & Head, Department of Medicine & Medical Education, JIPMER, Pondicherry-6)

More than a Laptop Computers, the handheld personal computer is changing the way we practice medicine in 21st century. Handheld PC, also called Personal Digital Assistant (PDA) is more than an electronic diary for storing addresses and phone numbers. It is a PC with multimedia capability. It is so versatile and comes with a high capacity to store electronic information. A doctor can carry a whole medical library including pharmacopoeia and formulary in his / her pocket.

A typical day of PDA enabled doctor:

- ✧ Wakes up to an alarm of PDA
- ✧ Checks the calendar for appointments for the day.
- ✧ During clinical practice, frequently refers to drug formulary for checking of dosage and drug interactions, especially of the new drugs.
- ✧ Uses as a medical calculator to check Coronary Risk, etc. whenever relevant patients are being examined.
- ✧ Uses note pad for noting down the ideas and various medical points to check out later.
- ✧ Refers to address book to make a few phone calls to colleagues.
- ✧ Connects to cell phone to check email and sending replies.
- ✧ Uses the in-built camera to record interesting cases
- ✧ Finally during free time, wears the head phone to listen latest music in MP3 format, stored in the flash card of the PDA.

Some of the popular models are Palm PC and Pocket PC. In the west, most of the new generation doctors are PDA enabled. Time is ripe for Indian doctors to adopt this technology for efficient patient management.

(Acknowledgement: Dr. Jayaprakash & Dr.W.Taggu for their help)

EDITORIAL 2:

MDG and HRH - the New Mantras for Educators

(Dr.K.R. Sethuraman, Director-Professor & Head, Department of Medicine & Medical Education, JIPMER, Pondicherry-6)

The "Ivory Tower approach" of educators is now passe. The dawn of 21st century has ushered in a globally perceived need for equitable and ethical development of the global community; it has also focused on the importance of Human Resources for Health (**HRH**) in achieving some of the goals. It is time Medical Educators of India (and other health professional educators) get to know these new mantras and help India meet its targets.

Background Information

United Nations adopted the Millennium Declaration by passing resolution 55/2 on 18 September 2000.

The Millennium Development Goals (MDG) are -

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria, and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

(For a full list of MDGs, their targets and indicators, see: http://unstats.un.org/unsd/mi/mi_goals.asp)

The unique feature here is that 8 goals to be met by the year 2015 have been set for all the countries of the world. Annual follow up of every country on its performance in each of these 8 goals is being carried out and published on the UN website (www.un.org). It is expected that each country - including India - strives to achieve these goals at the earliest.

New Roles for Educators

We, the Medical (and allied) Educators facilitate the development of human resources for health. It is apparent that MD-goals 4 - 6 deal with healthcare issues; in addition, the goals 3, 7 and 8 have important implications for healthcare professionals. Therefore as facilitators and developers of HRH, we have to realise our roles in meeting the MDG.

A recent article in the Lancet¹ has suggested the following 7 themes for research and development of HRH.

Seven Themes in HRH priority research issues²

- 1: Assessment, Policy and Planning for health workforce
- 2: Managing the size, skill mix and organization of the health workforce
- 3: Using incentives to improve performance of the health workforce
- 4: Mobility of the health workforce
- 5: Educating and training the health workforce
- 6: Legislation and regulation of the health workforce
- 7: The influence of the political and macroeconomic contexts on the development of national HRH strategies and policies

The years 2006 to 2015 will be the decade for research and development of HRH.

We have to address the following issues in Indian context and arrive at our own unique solutions:

- How best to address shortages of human resources for health and poor health-worker performance?

- How best to increase the use of effective forms of health care and decrease the use of ineffective forms of care?

- How to control the use of pharmaceuticals to ensure that limited resources are well spent?

- How best to integrate programmes targeted at priority problems such as Malaria, HIV/AIDS etc into existing health-care systems?

The World Health Organisation (WHO) is gearing itself to help educators in HRH research. It is for the enterprising educators among us the make use of the opportunity and rise to the challenge of meeting MDG through HRH. You may join HIF network of WHO³ and strengthen it further.

References

1. Travis P, Bennett S, Haines A, Pang T, Bhutta Z, Hyder A, Pielemeier N, Mills A, Evans T. Overcoming health-systems constraints to achieve the Millennium Development Goals. *Lancet* 2004; 364: 900-906
2. Task Force on Health Systems Research Informed choices for attaining the Millennium Development Goals: towards an international cooperative agenda for health systems research. *Lancet* 2004; 364 997-1003
3. Free Membership to 'HIF-net at WHO': working together to improve access to reliable information for healthcare providers in developing and transitional countries. Send list messages to <hif-net@who.int>. To join the list, send an email to <health@inasp.info> with name, organization, country, and brief description of professional interests.

(Edited form HIF-net newsletters by Dr. K.R. Sethuraman.)

PROJECT REPORT: 1 (47th National Course)

Use of Multiple Choice Questions (MCQ) test at the end of Lecture session.

(Dr. Vishnu Prasad, N.R., Asst. Professor of Surgery, Dept. of Surgery, JIPMER, Pondicherry)

Lecture is one of the common methods of teaching and it is still being used widely in undergraduate medical education. It can be made more effective by 'talking' to students, where questions and answers and discussions become the major activity¹. It can also be made more effective by carefully planning, organizing and delivering. Giving a MCQ test at the end of the lecture is one of the methods of making the lecture more effective besides it also evaluates the effectiveness of the lecture. Hence the following project was taken up with the aim of improving the effectiveness of the lecture and to find out the effectiveness of the lecture using a MCQ Test.

Methodology:

This study was done during the weekly surgery lecture session of 4th and 5th term MBBS students,

over a period of 8 months. One-hour lecture period was divided into 40 minutes lecture session and 20 minutes session of Multiple Choice Questions (MCQ) test. After 40 minutes of lecture session, students were given a MCQ test relevant to the lecture session. The MCQ test comprised 5 to 6 MCQs and students were asked to answer the same in 5 to 6 minutes. At the end of the tests, 5 to 6 students were selected randomly, to get up and answer the MCQs and if correct answers were given, they were appreciated. In case of wrong answer it was corrected and the same point was re-emphasized.

At the end of six months students were asked a feedback regarding the usefulness of the MCQ test and the opinions were recorded in one of the class where 45 students were present.

RESULTS:

Table 1: Favourable Response

		No.	%
1	MCQ test was useful	44	97.8
2	MCQ test revised the lecture session	16	35.6
3	MCQ test kept them alert / made them listen attentively	15	33.3
4	MCQ test stressed important points	10	22.2
5	Request to increase the number of MCQ in the test	9	22.0
6	MCQ test must be conducted in other classes	4	8.8
7	MCQ test will help in future entrance	3	6.6
8	MCQ test made us realise our wrong understanding	3	6.6
9	MCQ test makes one think	1	2.2
10	MCQ test, if conducted in the next class, will make us read	1	2.2
11	MCQ test marks should be counted as internal assessment marks	1	2.2
12	MCQ test made concept simple	1	2.2

Table 2: Unfavourable response

		No.	%
1	No comments on usefulness of MCQ test can be made	1	2.2
2	Instead of MCQ test question-answers interactive session better	1	2.2
3	MCQ test at the end of each lecture session - boring; better at the end of one topic	1	2.2
4	Standard of MCQ test should be increased	1	2.2

Average marks obtained by 85% of students in all these tests ranged from 83 - 100% (Table 1). Most of them (97.7%) found the MCQ test to be useful. Many (35.6%) opined that MCQ test gives them a revision of lecture session, keeps them alert and makes them listen attentively. Many (22.2%) of them also felt MCQ test helps in stressing important points. Some of them became so enthusiastic and demanded an increase in the number of MCQs in the test and felt that similar methodology may be introduced in all others lecture classes. Other favourable opinions of the students are tabulated in Table 1.

Only one student felt that he couldn't comment over the usefulness of MCQ test. (Table No.2) One of them felt question-answer session type of interaction is better than MCQ test. One more felt that instead of MCQ test at the end of each lecture class, MCQ test at the end of a major topic is better.

Hence, it can be concluded that giving a MCQ test at the end of a lecture class is useful. It gives students an overall picture of the lecture again, makes them more attentive in the class, helps in emphasizing the important points and makes them think over the subject taught.

Reference:

1. G.S.Moni, Teaching-Learning Methods-1: Lecture In: Ananthakrishnan, N; Sethuraman, K.R, Santhosh Kumar (ed). Medical Education Principles and Practice; 2nd edition. Alumni Association of NTTC, JIPMER, Pondicherry, 2000:45-49.

PROJECT REPORT: 2 (48th National Course)

Integrated Teaching for MBBS students

(Dr. Vijaya V. Mysorekar, Assoc. Professor of Pathology, Dr.A.C. Ashok, Assoc. Professor of Surgery, M.S. Ramaiah Medical College & Hospital, Bangalore - 560 054)

Introduction:

Till recently, teaching of undergraduate students in our institution mainly involved didactic lectures and practicals, which were being conducted in individual departments. There was no much interaction between departments, which the result that a student was too much of a theoretician till he reached the final phase of MBBS. Integrated teaching reduced this "water-tight compartmentalization" of the various disciplines of medical education and enables the student to study medicine with a wider perspective.

Objectives:

The objective of integrated teaching is to give an MBBS student an exposure to the full range of disciplines relevant to each clinical area of study and to make medical education more comprehensive. This kind of a teaching programme sensitises the student to clinical problems early in his medical course and thus may improve his skill in drug prescription and patient management.

Methodology:

Students of 3rd, 4th and 5 semester numbering about 150 were included in the integrated teaching programme. Before the actual commencement of these sessions, certain preliminary steps were taken for the planning. These included:

1. Obtaining topics of importance and suitability for integrated teaching from each department (discipline).
2. Identification of a co-ordinator for integrated teaching in each department and a chief co-ordinator to oversee the entire process.
3. Framing of a timetable including the topics and participating departments and circulation of this timetable to all the departments and students at the beginning of the term.
4. Formulation of certain guidelines to be followed throughout the programme.

As per the formulated guidelines, a meeting of the co-ordinators of all the departments integrating for the particular topic was held 10-14 days prior to the session. The learning objectives, learning resources and the media required were decided during this meeting. In order to make the sessions more interactive and to facilitate self-learning by the students, a set of questions pertaining to the particular topic was prepared and displayed on the notice board. With the help of these questions, the students were expected to do some preliminary preparation for the session.

The integrated teaching sessions were of 2 hours duration each, and were conducted once a week. The topics covered over a 6-month period are shown in Table 1.

No.	Topic	No. of hours	Participating Departments
1	Inguinal hernia	2	Anatomy, Anaesthesiology, Surgery
2	Acquired Immuno deficiency Syndrome (AIDS)	4	Microbiology, Pathology, Dermatology, Medicine, Pharmacology, Community Medicine
3	Lump in the breast	4	Anatomy, Pathology, Surgery, Oncology
4	Tuberculosis	5	Microbiology, Pathology, Chest Disease, Radiology, Orthopaedics, Obst. & Gyn., Surgery
5	Leprosy	4	Microbiology, Pathology, Dermatology, Pharmacology, Community Medicine
6	Pyrexia of unknown origin	4	Physiology, Pathology, Medicine, Paediatrics, Pharmacology
7	Osteomyelitis	4	Pathology, Radiology, Orthopaedics
8	Physiological changes in pregnancy	4	Physiology, Obst. & Gyn., Medicine, Cardiology
9	Red eye	2	Anatomy, Microbiology, Ophthalmology
10	Trauma	6	Surgery, Orthopaedics, Radiology, Forensic Medicine

Evaluation

It was initially decided that the students would be evaluated by multiple choice questions (MCQs) given in the form of a pre-test and post-test, but this could not be done due to shortage of time during the sessions. Moreover, the evaluation of answer sheets of both the tests would have been cumbersome, considering the large number of students. Thus, individual student evaluation could not be done. However, the integrated teaching process as a whole was evaluated by obtaining feedback from the students involved, a few postgraduate students and faculty members.

Evaluation by postgraduate students and faculty members: The evaluating team included persons belong to the various disciplines integrating for the particular topic. A checklist was provided. The assessment was shown in Table-2.

	Very Good	Good	Satisfactory	Poor
Choice of the topic	40%	30%	30%	-
Preparation of the topic by the students	20%	60%	15%	5%
Extent of discussion of practical applications	30%	30%	40%	-
Interaction between the students and faculty	5%	15%	50%	30%
Overall effectiveness of the discussion	25%	40%	35%	-

Comments made by the evaluating postgraduate students:

- A simple topic should be selected.
- There should be more active participation by all the students.
- There should be better interaction between the faculty members and students.
- Attendance is poor for the teachers' efforts. (The attendance for the integrating teaching sessions was 15% less in comparison to the usual lecture classes).

Comments made by the evaluating faculty members:

- Better interaction between the faculty members and students is required.
- Overlap of material presented by the faculty of various disciplines should be avoided.
- Better time management is required
- More audiovisual presentation is required.
- Overall, a good effort.

Suggestions made by the faculty:

- Integrated teaching can be started slightly later in the course, by about the 7th semester, when the students can understand and assimilate the information better.

Student feedback:

Positive points mentioned by the students:

- Systematic.
- Provides complete information about a given topic.
- Improves knowledge.
- Creates interest.
- A specific problem is focussed on.
- Bridges the gap in conventional medical education.
- The questions put up are good.
- Encourages student participation.
- Very effective.
- Integrated teaching should continue.

Negative points mentioned by the students:

- Long sessions. Too many concepts are introduced at a time.
- Different teachers have different styles of presentation; hence it becomes difficult to assimilate all the information.

Suggestions given by the students:

- Less theoretical details, more practical and clinical points should be discussed.
- Avoid overlap of matter.
- Questions should be permitted only at the end of the session to avoid interruption and disturbance.
- Evaluation should be done immediately after the session, and for every student.

A confidential discussion was held with the students who were regularly remaining absent from these sessions. They felt that their prime concern at present was passing the Phase II of MBBS. They wanted to concentrate only on studying para-clinical subjects right now and were worried that integrated teaching with details of clinical aspects would take up too much of their time.

Plans for improvement:

On the basis of the above feedback, the modules will be modified for the next cycles. Students of all semesters will be gradually included in the integrated teaching programme. Better motivation of all the students to attend these sessions will be attempted. Individual student evaluation will also be done.

Acknowledgements: We are grateful to Dr.Sandhya Belwadi, Principal, M.S. Ramaiah Medical College and Dr.Medha Y.Rao, Professor and Head, Department of Medicine for their timely suggestions and kind co-operation while conducting this programme.

OTHER REPORTS:

Quiz Competitions: A Novel Method of Teaching and Learning.

(Dr. P.S. Baji, Dr. A.D. Surdi, M/s P.R. Bhadene, Department of Physiology, Dr. V.M. Medical College, Solapur)

Quiz Competition as an innovative Teaching and Learning Method was studied in the

Department of Physiology, Dr. V.M. Medical College, Solapur for a batch of 100 students. The medical quiz was conducted in the subject of Physiology with traditional ways viz. Passing Round, Buzzer Round, Common Round, Audience Round and Rapid Fire Round. All students found it is very interesting experience and majority said it develop team spirit. Only 6% of the students had negative comments.

The full text and further details can be obtained from Dr.P.S. Baji, Dept. of Physiology, Dr. V.M. Medical College, Solapur.

Training of Trainers – Our experience:

(Dr. (Mrs.) H.K. Shah, Lecturer-cum-Epidemiologist, Dept. of P & S.M., Govt. Medical College, Goa)

Abstract:

The Training of the staff in Medical Education Technology was carried out in a phased manner. Pre-test and Post-test was administered and the results of 50 participants are presented in the article. The workshops received very encouraging responses and awareness about Medical education Technology was established.

It is very clear that such training programmes were needed to enable teachers to practice teaching as a Science as well as an art.

The study has been carried out in a private medical college in Pune. Further details and full text can be obtained from Dr. (Mrs.)H.K. Shah, D-11, F Block, Govt. Qtrs., Opposite to Fire Brigade, St. Inez, Panaji, Goa – 403 001 (email: hkstnp69@rediffmail.com)

THE EVOLUTION OF A BETTER MEDICAL EDUCATOR

(Dr. M. Anthony David S. Kumar Professor, Dept of Physiology, Rangaraya Medical College, Kakinada 533 003. Andhra Pradesh, India)

ABSTRACT

A systematic feedback about teaching techniques was obtained from undergraduate medical students by a medical educator in late 1989. He was then in the early years of his career. The results were analysed and conclusions drawn from the feedback. The same medical educator took a similar feedback in 2003. The objective of this paper is to compare and analyse the evolution of teaching methods in this medical educator, as reflected by the two sets of feedback. The factors contributing to the change are derived. A few conclusions are drawn as to how aspiring medical educators can fine-tune and hone their skills in teaching.

INTRODUCTION

There has been a practice of taking feedback from undergraduate medical students as an important tool for the evaluation of teaching

programs.¹⁻⁴. The use of feedback in this context is to:

- Improve subsequent teaching methods or skills.
- Appreciate and enhance the morale of the educators.
- Measure the development of teaching skills in a given medical educator through the years.

It is true that some researchers opine that students treat the process of giving feedback lightly. They sometimes respond in a manner that they feel the educators want them to respond.

However, some others like Panna Lal et al⁵ claim that more than 80% of students give genuine opinion while giving feedback. The present study is an analysis of two such feedbacks taken by the same medical educator with a time gap of about 14 years.

In 1989, a single medical educator gave a series of lectures on a related topic in Physiology. Systematic feedback was then taken from the students. The detailed analysis of this feedback has been published elsewhere⁶. The same medical educator took a second feedback again from undergraduate medical students in April 2003.

MATERIALS AND METHODS

A single medical educator gave to 150 medical students who were admitted into the Gandhi Medical College, Secunderabad, AP. This was part of their regular academic schedule.

At the end of this series of lectures, in April 2003, the students were asked to fill in a feedback questionnaire. The questionnaire (Please see Appendix I) had twelve multiple-choice questions of the single best response type on various aspects of the method of teaching. The students were specifically asked not to identify themselves to ensure the anonymity and get an unbiased feedback.

The feedback obtained from the above questionnaires was analyzed and studied systematically. The results were then compared with the results of the earlier feedback and contrasted and studied.

RESULTS

All the 150 students took part in this study. However, some of them did not answer some of the questions. Some gave more than one response to some multiple-choice questions. So, the number of responses for each individual question ranges from 141 to 180 though the students were only 150 in number. The comparative analysis of the MCQ questions in the two feedbacks is shown in the Table No 1.

Overall, it was observed that most of the components such as audibility, humor, comprehensibility, and other desirable features were improved over the years.

OPEN ENDED QUESTIONS:

1. SUGGESTIONS FOR IMPROVEMENT:

In the previous feedback, a vast majority of students complained about the fast pace whereas only 14 out of 150(9.33%) did so in the second feedback.

In the second feedback, there were suggestions such as:

- 'Increase the number of transparencies.'
- 'Use more figures in your transparencies'
- 'Repeat the key statements'
- 'Use a little more of humor to make the classes livelier'

2. COMMENTS & CRITICISM:

The positive comments were many and included the following: -

- 'The lectures were excellent'
- 'He needs no improvement'
- 'Transparencies used were excellent'
- 'Could understand and get a clear concept'

There were a few negative comments, which included: -

- 'Some of the jokes made me feel uncomfortable.'
- 'Please use simpler English for some of us are from a vernacular study background.'
- 'Could not write down notes in the class.'

DISCUSSION

The feedback from students taken in two phases of a medical educator's career gives a clear picture of the growth as it were in his teaching techniques and methodology.

The general opinion rating has been improved from 68.8% in 1989 to about 97.04%(considering satisfactory, good & excellent together) in 2003. The audibility has become 97% from the previous 80%. This could probably be due to better public address system available. It is significant to note that, while 73.4% of the students felt that the pace was too fast in 1989, only 3.42% felt the same in 2003. The pace of the educator must have come down probably due to experience gained and due to acting on feedback from the students from time to time.

The content matter of the educator has drawn a mixed feedback. About 20.66% feel it is more than necessary or too high a standard, in 2003. In 1989, only 10.9% felt that the content was too high. Perhaps the educator's own grip of the subject has increased in the intervening period.

It is gratifying to note that only 13.79%(as against 21.9%) feel that note taking is impossible during the class. Only 9.22% of the students felt that the source materials were too few while the majority (90.78%) felt that they were either just right or too

many. More students (42.2%) felt that the materials were too many in the earlier feedback. Perhaps as the educator was relatively inexperienced, he was using too many source materials then and being better experienced now was using the right sources.

Over 96% of the students felt that the Audio Visual Aids were used either enough or more than enough in 2003. Only 3.45 % felt that they were underused. More than 17% of the students in the earlier feedback felt that the use of the AV aids was too little. This was probably due to the exposure of the medical educator to various workshops and seminars where the use of AV aids was emphasized.

As far as the format of the class was concerned, only 84% of the students expressed happiness about it in 2003 while the percent was higher at 94% in 1989. Over a quarter of the students felt that they comprehended the classes very clearly and very well. But still 8.9% felt that they were not able to understand.

The overall grading given by the students reflects that above 90% gave either good, or average grade while less than 2% feel that he was poor. 6.5 % felt that he needs improvement.

CONCLUSION

The comparison of the feedback overall shows a definite increase in the teaching skills of the medical educator concerned. What then could be the factors causing this improvement of skills?

Some of these would be: -

- The experience of taking more and more classes.
- An open and learning attitude which helped him learn from: -
 - The positive and negative features of other medical educators.
 - The students by their involuntary and voluntary feedback.
 - Study of literature on teaching & training methodology.
 - Discussions with colleagues and students on better teaching techniques.
- Exposure to the special 10-day course on educational science and technology at the National Teacher Training Center, JIPMER, Pondicherry in September 1999.

Experience in teaching, coupled with an attitude of learning and openness will then go a long way to improve the teaching skills in medical educators.

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Letter to the Editor:

Proposed changes to MCI Regulations 1997 Comments / Suggestions of CHPE, Medical College, Thiruvananthapuram.

CHPE on going through the comments given by the NTTC, JIPMER, Pondicherry, feel that all the comments are thought provoking and very apt.

Our suggestions are as follows:

1. Regarding the 3 months course on English, Computer, Ethics and History of Medicine
 - a. In the proposed changes by the MCI it has not been mentioned about the syllabus, the person who is going to take classes and the mode of evaluation on those four subjects.
 - b. It is not necessary to teach all the students English and Computer since those subjects are not at all specific for Medicine. The students who are already competent in English and computer may have to spend their time on these subjects instead of medical subjects. The student who needs support in these subjects may be given the same out of the routine teaching hours. Alternatively, the entrance examination for selecting the students may include such

subjects to verify their knowledge and skill in those subjects.

- c. An exposure to topics on communication skill and behavioural principles may be given immediately after pre-clinical examination.
2. Regarding clinical subjects:
Medicine and Paediatrics should be taught and evaluated simultaneously since they are closely interrelated.
3. Integrated teaching:
Emphasis should be given on integrated teaching methods with participation of the various concerned departments.
4. Duration:
The duration of the MBBS course and the House Surgeoncy period is 5½ years. It will be apt only when training is given during House Surgeoncy period for 1 year. The 4½-year period may be divided as 9 semesters. The first 3 semesters for pre-clinical time Anatomy, Biochemistry and Physiology; Clinical postings may be for the next 6 semesters in the morning hours and the practicals in the afternoon.

Pharmacology, Pathology, Microbiology and Forensic Medicine may be conducted at the end of the fifth semester. At the end of the seven semester examinations on Community Medicine, ENT, Ophthalmology, Orthopaedics may be conducted. At the end, all other subjects are evaluated.

The semesters are of 6 months duration including the conduct of examination, evaluation and holidays for students.

5. Going back to the old system:

Since 1997 Regulations carry a lot of anomalies. It is better to go back to the old system (system that were followed prior to 1997 regulations) with slight modifications.

Dr. L. Vijayalakshmi,
Convenor, CHPE,
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BOOK REVIEW 1:

Practical Guide to the care of the Medical patient – 6th Edition, 2004. Mosby, Indian Reprint. New Delhi. 24. Elsevier.

Along with the publication of encyclopaedic reference books and standard single volume textbooks on Internal Medicine, it is good to see several new handy manuals, which aim to provide clear and concise information of practical

relevance. These ready reckoners help in point of care reference to current, medical practice.

Section 1 on assessment of the patient is brief (38 pages). Section 2 on differential diagnosis of signs and syndromes is alphabetically organized and a unique part of the manual. Sections 3 to 13 deal with individual systems or discipline. Section 13 devoted to interdisciplinary medicine. The final part of the manual deals with bedside procedures, laboratory values drug formulary and several appendices of formulae and nomograms. All in all, this is a very useful handbook for interns and P.G. residents in training.

BOOK REVIEW 2:

The Osler Medical Hand Book – Alan Chieng & Aimee Zaas. 2003 c Mosby – Iondian Edition – New Delhi 24, Elsevier

This handbook is a ready reckner with a wealth of information for the busy residents and junior physicians. The first part is on acute care is brief (about 60 pages) on life support and bedside procedures.

The second part of about 1000 pages covers the essential management principles of important clinical conditions and syndromes. Part III is hospital formulary, which gives useful drug information including important interactions. Part IV is a brief section of tables, charts and formulae for rapid reference. The font could have been more easily readable. The image album is of mediocre quality in the Indian edition. These were perhaps done to keep the cost low and curb photocopying.

This book should find a place in the coat pocket of physicians-in-training.

AUTHORS AND PUBLISHERS – PLEASE NOTE

The National Teachers Training Centre (NTTC), JIPMER is willing to publish brief reviews of books on medical and allied science subjects in the future issues of NTTC Bulletin. The bulletin reaches medical educators who are alumni of NTTC and also most of the medical colleges in the country.

One copy of the book may be sent to the Project Officer, NTTC, Dept. of Medical Education, JIPMER, Pondicherry-605 006.

EDUCATIONAL PROJECTS INITIATED DURING 49TH NATIONAL COURSE

The 49th National Course was held at JIPMER, Pondicherry from 4th - 13th October 2004. The following projects were presented by the participants and approved. We wish them speedy execution of the projects and looking forward for receiving the final report.

Submitted by	College	Title
Dr. Prashant E. Natekar Professor & Head of the Dept. of Anatomy	Goa Medical College, Goa	Evaluation of the validity of the selection criteria for admission to MBBS course adopted at Goa Medical College.
Dr. (Mrs.) N.G. Borade, Professor of Physiology	Govt. Medical College, Miraj	Evaluation of the question papers of Physiology for First MBBS – A Review.
Dr. (Mrs.) Jayashree V. Ganu Assoc. Professor of Biochemistry	Govt. Medical College, Miraj	Scope of Molecular Biology in the curriculum of Biochemistry at First MBBS level.
Dr. Prasanta Kumar Bhattacharya, Assoc. Professor of Medicine	Assam Medical College, Debrugarh	Impact of micro teaching techniques on the teaching abilities of postgraduate students of General Medicine: A pre and post assessment study.
Dr. S.S. Agarwal, Asst. Professor of Forensic Medicine & Toxicology	Govt. Medical College, Surat	Identification and motivation of slow learners.
Dr. Shatrughan Prasad M. Mandal Asst. Professor of Forensic Medicine & Toxicology	Surat Municipal Institute of Medical Education & Research, Surat	Improvement in the performance of undergraduate students in the Department of Forensic Medicine & Toxicology.
Dr. D.V.S.S. Ramavataram, Assoc. Professor of Biochemistry	Surat Municipal Institute of Medical Education & Research, Surat	Identification and motivation of slow learners of First MBBS at SMIMER, Surat.
Dr. A.L. Hemalatha, Asst. Professor of Pathology	Govt. Medical College, Mysore	Creation and maintenance of question bank for undergraduate evaluation
Dr. K.N. Nagaraj, Asst. Professor of Surgery	Govt. Medical College, Mysore	Motivating Final year students / interns adopting positive attitude to early referral of patients for specialist care.
Dr. A.B. Taly, Professor of Neurology	NIMHANS, Bangalore	1. Entrance Test for DM Neurology – Training programme at NIMHANS: A second look at MCQs 2. Short term training in neurology for PGs of internal medicine
Dr. Girish Prabhu, Assoc. Professor of Biochemistry	A.J. Institute of Medical Sciences, Mangalore	Identification and classification of factors determining learning and performance in Undergraduate
Dr. Selvaraj Stephen, Assoc. Professor of Microbiology	Mahatma Gandhi Medical College & Research Institute, Pondicherry	Identifying and motivating slow learners in Microbiology at MGMC & RI, Pondicherry
Dr. Prakash Kumar Sahoo, Asst. Professor of Surgery	Mahatma Gandhi Medical College & Research Institute, Pondicherry	Formative evaluation of Undergraduate students through MCQ examination
Dr. Shanthi Ananthkrishnan, Assoc. Professor of Paediatrics	Mahatma Gandhi Medical College & Research Institute, Pondicherry	Creating and maintaining a question bank for evaluation and teaching of undergraduate medical students in MGMC & RI, Pondicherry
Dr. B.R. Asokan, Tutor in Community Medicine	Aarupadaiveedu Medical College, Pondicherry	A study on the pattern (Merits and demerits) of internal assessment in medical education.
Dr. L. Jeevanandam, Lecturer in Prosthodontics	Mahatma Gandhi Dental College, Pondicherry	Students preference for chalk-board method Vs use of audiovisual aids (OHP) in class room teaching.
Dr. K. Rajanna Chief Medical Officer (NFSG)	JIPMER, Pondicherry	Programme on orientation and demonstration of skills for fresh postgraduate students in Anaesthesiology.
Dr. Ratnakar Sahoo, Asst. Professor of Medicine	JIPMER, Pondicherry	A Critical analysis of MCQ in Internal Medicine for undergraduate students.
Dr. S. Sowmya, Asst. Professor of Pathology	JIPMER, Pondicherry	Use of Pre-test and post-test in routine theory classes for the II MBBS students in the Pathology Department, JIPMER.
Dr. S. Thanikachalam, Asst. Professor of Ophthalmology	JIPMER, Pondicherry	Introducing simulated patient management problems (SPMP) using written model exercises as a teaching method for clinical year students.
Dr. R. Gowri, Asst. Professor of Obst. & Gyn	JIPMER, Pondicherry	Introduction of non-scholastic skills in labour room management to Obstetric students.
Dr. Kusa Kumar Saha, Sr. Resident in Forensic Medicine	JIPMER, Pondicherry	Demonstration of autopsy to Undergraduate students in Forensic Medicine
Dr.V.P. Nalankilli, Sr. Resident in Surgery	JIPMER, Pondicherry	Bedside / practical oriented teaching on common health problems like abscess wound care, etc. for UGs.
Dr. K. Satish Srinivas, Senior Resident in Radio-therapy	JIPMER, Pondicherry	Radiotherapy curriculum for undergraduates.

BOOK POST - PRINTED MATTER

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