



# N.T.T.C.

## BULLETIN

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Theme of this issue  
**E-LEARNING**

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## ***Lead Article:***

# **E-LEARNING: UNLIMITED POTENTIAL APPLICATION IN UNDERGRADUATE MEDICAL EDUCATION**

**Dr. Santosh Kumar, Director-Professor & Head, Departments of Urology and Medical Education, JIPMER, Puducherry.**

## **I. What is e-learning?**

E-learning is education, especially for adults, that is conducted by means of the internet.<sup>1</sup> The internet and websites are increasingly used for various non-educational (eg. e-banking, e-marketing) and educational (eg. distance and open university education) purposes. This is a logical and natural consequence of progressively wider availability of the internet facility at a reasonable cost. The internet and websites are already being used in the United States and Canada for graduate medical education.<sup>2</sup>

## **II. What inputs / resources are needed for e-learning?**

1. The medical college should have the internet facility available and accessible to all medical teachers and all medical students.
2. The medical college should have its own educational website for MBBS education.
3. The medical college should have an e-learning division under the Dean / Medical Education Unit or Department for coordinating and maintenance of e-learning activities.
4. The medical college should have medical teachers motivated to use e-learning.
5. The medical college should have medical students ready to use e-learning.

## **III. What are the advantages of e-learning?**

1. Once the e-learning infrastructure is in place, preparation and distribution of e-learning resource materials is more cost-effective and less labour-intensive than the conventional paper-based system of preparation and distribution of learning resource materials.
2. E-learning is largely learner-controlled and it will take care of different learning rates of the learners. E-learning will also promote self-learning which is recommended by Medical Council of India.<sup>3</sup>
3. E-learning should facilitate the achievement of learning objectives in cognitive domain.
4. E-learning by facilitating the achievement of learning objectives in cognitive domain should logically lead to the availability of more curricular time for the achievement of learning objectives in affective and psychomotor domains and for problem-oriented learning.

## **IV. What are the limitations of e-learning?**

1. E-learning is less helpful in the achievement of learning objectives in affective and psychomotor domains.
2. E-learning is not helpful in providing real-life experiences (clinicals, practicals and field work)

## **V. What are the potential uses for e-learning?**

### **A. CURRICULUM.**

The undergraduate medical education curriculum comprising institutional and departmental learning objectives, the course content of different subjects, the teaching-learning methods, the evaluation methods, time-tables for different activities and recommended books and other learning resource materials can be made available and accessible to all medical teachers and all medical students. Availability and accessibility of the entire curriculum to all medical students is highly desirable from educational point of view.

### **B. LEARNING OBJECTIVES**

Learning objectives of lectures, tutorials, seminars, clinical sessions, practical sessions and field visits can be communicated to the medical students before respective activities to enhance their effectiveness and efficiency.

### **C. TEACHING-LEARNING ACTIVITIES.**

1. Background and introductory information and full or partial content of lectures, tutorials, seminars, clinical sessions, practical sessions and field visits can be communicated to the medical students before respective activities to improve their effectiveness and efficiency.
2. Problem solving exercises and introductory information for modular teaching sessions can be communicated to the medical students before the modular teaching sessions to improve their effectiveness and efficiency.
3. Project and assignment-related information can be communicated to the medical students.

### **D. FORMATIVE EVALUATION**

Tests related to formative evaluation can be easily administered through the internet and can be assessed by self-, peer- or teacher- evaluation.

### **E. DEVELOPMENT OF LITERATURE SEARCH SKILLS.**

Literature search skills can be taught to medical students through the internet. This is also important in view of ongoing progressive changes and advances in medical practice towards evidence-based medicine.

### **F. OTHER USES:**

*These uses would be limited only by  
the extent of  
the imagination and creativity of  
medical teachers and educationists.*

## REFERENCES:

1. Concise Oxford English Dictionary, New York; Oxford University Press, 11<sup>th</sup> edition, 2004
  2. Anderson MB (Editor and Compiler) A Snapshot of Medical Students' Education at the Beginning of the 21<sup>st</sup> Century: Reports from 130 schools. Academic Medicine. Vol.75, No.9, September Supplement, 2000.
  3. Institutional Goal no.(e). In: "Objectives of Medical Graduate Training Programme", Chapter I, Regulations on Graduate Medical Education, 1997, Medical Council of India.
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### ***Project Report:***

## **IMPROVING COMMUNICATION SKILLS OF MEDICAL STUDENTS THROUGH COMMUNITY INTERACTION**

**Dr. Thomas Mathew, Professor in Community Medicine, T.D. Medical College, Alappuzha, Kerala- 688 005.**

### **Introduction / Definition of the problem:**

The present millennium with its mind boggling pace and facilities for instant communication also witnesses increasing problems in health sector due to lack of communication. Patient dissatisfaction, mistrust, malpractice issues etc are often related to communication problems rather than clinical incompetence. Communication skill –a core skill in the affective domain need to be taught at the undergraduate level itself. The challenge lies in offering students adequate and appropriate learning experience so that he / she acquires the right attitudes and skills during their undergraduate days.

### **Situation analysis:**

The revised MCI curriculum 1997 has increased teaching learning hours in community medicine in order to lay emphasis on community based learning. As per this, a medical student has two and half months of practical postings (forenoon – three hours / day) in Community Medicine. During this period, the student gets ample opportunities to interact with various sections of the community. Hence this is the ideal time to introduce the concept and practice of appropriate communication skills.

### **Objective:**

To improve group communication skills of medical students through exposure to varied groups in the community during their posting in Community Medicine

### **Methodology:**

Batch of 8-10 students each coming for 5<sup>th</sup> semester posting in Community Medicine was chosen. 18 student were studied in 2 batches. The process involved

- Development of a checklist to assess the process of communication. Checklist included 10 areas [Arousal of interest, specific objectives, content, nonverbal cues, voice, use of Audio visual aids, interaction, summarizing and time management.] each carrying 5 marks. Final score was determined by adding the total marks.
- Deciding a group in the community: - Adolescent girls of 30-50 in schools/community.
- Allotment of a topic: - Adolescent health was the chosen topic. Different aspect of the topic was given to each student.

- Mock presentation of the allotted topic for 10 minutes was carried out in the department on the next day. 4-5 faculty members scored the students based on the checklist and average score taken as pre intervention scores.
- Intervention:- the positive and negative aspects of presentation of each student was discussed jointly by students and faculty. Ways to improve group communication skills were evolved.
- Post intervention activity. Each batch presented their topics to the group in the community. Each session was followed by question & answer session.
- Post intervention scoring:- The scores of each students on all days were assessed by 4 faculty members based on the same checklist and averages scores determined .
- Feed back

Feedback was taken from

1. Adolescent girls in school/ community to assess usefulness of the program.
2. Medical students them selves to evaluate their own experience
3. Faculty members to identify areas of strengths and weaknesses of the programs

## RESULTS:

The first batch comprised of 10 students.

Pre & post intervention scoring of 1<sup>st</sup> batch is given in Table I

Table 1

Students No.	Pre-intervention Total Score (50)	Post intervention scores		
		Day 1	Day 2	Average Score
1	19	32	27	29.5
2	16	26	30	28
3	25	29	37	33
4	21	26	31	28.5
5	19	27	Absent	27
6	14	23	Absent	23
7	25	33	38	35.5
8	28	37	37	37
9	28	28	32	30
10	20	33	Absent	33
Class A	21.5	29.4	33.1	30.45

The second batch comprised of 8 students of 5 girls and 3 boys. Classes were imparted by the 5 girls repeatedly to groups of 30-50 adolescent girls attending adolescent camp of

Anganwadis in 4 Panchayats in the area. 3 North Indian boys could not participate in the programme due to languages barriers. Pre & Post intervention scoring of 2<sup>nd</sup> batch is given in Table 2:

Table 2

Students No.	Pre-intervention score	Post intervention scores					% Improvement
		Day 1	Day 2	Day 3	Day 4	Average score	
1	23	23	25	29	27	26	13%
2	25	27	28	29	Absent	28	12%
3	24	28	29	32	32	30	25%
4	17	29	25	30	29	28	64%
5	25	26	28	33	32	31	24%
	22.8	26.6	27	30.6	30	28.6	

(1) There is marked improvement between pre & post intervention score (2) There is marked improvement in individual post intervention scores with repeated exposure (3) There is marked improvement in class scores in average and serial post intervention scores when compared to pre intervention scores

**Feed back from adolescent girls in the community:** 80 adolescent in 2 schools & 160 adolescent girls in 4 adolescent camps gave the feedback that they liked the programme as it was useful. Student in schools gave feedback in writing for each student presentation. Even though it consumed a lot of time, their feedback stressed the usefulness of each talk & ways to improve the talk. Adolescent conveyed that the topic was relevant and that they could get information about issues, which they felt shy to discuss with. They were happy that their doubts were clarified. They gave cues like 'reduce pace of talk, increase clarity, ↓ nervousness to individual students. Feed back from medical students showed that the process helped to identify the strengths and weaknesses of their group communication skill. Each student felt more confident to face a crowd, had less tension with repeated performance and enjoyed the challenge of the process. They suggested that chance should be given to take classes for different groups. Feed back from Teachers found the process useful to improve communication skill of students. Faculty could identify areas where improvement and changes can be made with the next batch like encouraging use of more visual aids.

**Limitation:** (1) Students with lower scores and problem like stammering failed to turn up after the 1<sup>st</sup> post intervention class. Strategies to identify such students & further empower them need to be identified. (2) North Indian could not participate in the process due to language barrier. Alternate learning experiences need to be given to them. (3) Repeating the same topic to two or three groups initially improves the confidence and performance but when repeated more than that can turn not to be monotonous and less challenging for students.

## Conclusion

Exposure of medical students to adolescent groups in schools/community to exercise their group communication skills showed marked improvement following an intervention as assessed by pre & post intervention scores. The process gave an exciting and challenging teaching learning experience to faculty & medical students & was useful to the adolescent group in the community as assessed by feedbacks.

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### ***Book Review:***

## **CLINICAL ANATOMY FOR STUDENTS: PROBLEM SOLVING APPROACH**

Dr. Neeta V. Kulkarni, M.D., Head of the Department of Anatomy, Dr. SMCSI Medical College, Karakonam, Trivandrum.

Formerly: Professor and Head, Department of Anatomy, Government Medical College, Trivandrum

**Publisher: JAYPEE Brothers, Medical Publishers (P) Ltd., New Delhi; First Edition 2007, Number of pages: 949.**

This multi-colour, superbly and profusely illustrated book of excellent production quality is a comprehensive textbook of clinical anatomy with problem solving approach. The book is divided into six sections: (1) upper extremity, (2) thorax, (3) head and neck, (4) abdomen, pelvis and perineum, (5) lower extremity and (6) overview of osteology. Each section is further subdivided into chapters.

The text is well presented with clear headings and subheadings. The multi-colour line diagrams are of high quality and easy to understand. There also many tables which are also simple and easy to understand. Contents and index are comprehensive and make access to different part of the book easy.

The clinical and problem-solving aspects of the book add to the utility and relevance of the book. Clinical highlights indicating the clinical importance are given throughout the book. Each section of the book has a chapter on clinico-anatomical problems and solutions which are relevant to clinical integration of anatomy. Each section also has an annexure on radiographs which further add to the value of the book. The clinical highlights, clinico-anatomical problems and solutions and radiographs emphasize the clinical and problem solving approach of the book.

Lack of references and suggested further readings are an important limitation of this text book.

In conclusion, this easy to read text book of anatomy with clinical orientation and problem-solving approach is an important learning resource for medical students. The book is recommended to teachers of anatomy for consideration.

**Editor**

## **EDUCATIONAL PROJECTS INITIATED DURING 53rd NATIONAL COURSE**

The 53<sup>rd</sup> National Course was held at JIPMER, Puducherry from 26<sup>th</sup> Oct – 4<sup>th</sup> Nov. 2006. The following projects were presented by the participants and approved. We wish them speedy execution of the projects and look forward to receiving the final report.

1. **Introduction of regular formative students' assessment in Pharmacology**  
Dr. Moghe Vijay Vasant  
Professor of Pharmacology, MGM Medical College, Navi Mumbai
2. **To improve communication skills amongst interns of AFMC, Pune**  
Col. M. Dayananda  
Professor & Head, Department of Hospital Admn, Armed Forces Medical College, Pune
3. **Teaching/Learning of essentials of Allergic Rhinitis for MBBS students by attendance in Allergy Clinics during ENT clinical rotation.**  
Lt. Col. Ajith Nilakantan  
Associate Professor in ENT, Armed Forces Medical College, Pune
4. **Effect of SPMP as a T-L method on 5<sup>th</sup> semester students in Orthopaedics.**  
Dr. Arun H.S.  
Associate Professor in Orthopaedics, Sri Devaraj Urs Medical College, Kolar, Karnataka
5. **Impact of SPMP as a T/L method in the Dept. of Community Medicine**  
Dr. Prasanna Kamath, B.T.  
Asst. Professor in Community Medicine, Sri Devaraj Urs Medical College, Kolar, Karnataka
6. **OSPE based formative evaluation of students in clinical pathology**  
Dr. Swarna S. Kumar  
Professor of Pathology, Vydehi Institute of Medical Sciences and Research Centre, Bangalore
7. **The effectiveness of group tutorials as a teaching learning method in improving the learning outcome of M.B., B.S. students in the department of Ophthalmology.**  
Dr. Seema Channabasappa  
Associate Professor in Ophthalmology, Vydehi Institute of Medical Sciences and Research Centre, Bangalore
8. **Importance of Radiology Teaching for Final MBBS students / CRRRI for their day today practice in identifying Acute Abdominal condition & Chest emergencies**  
Dr. M. Adaikkappan  
Reader in Radio Diagnosis, Rajah Muthiah Medical College, Annamalai Nagar, Tamil Nadu
9. **Group discussion followed by presentation on given set of questions for better improvement of low learners.**  
Dr. K. Santha,  
Professor in Biochemistry, Rajah Muthiah Medical College, Annamalai Nagar, Tamil Nadu
10. **Use of MCQ's in formative evaluation in ENT for undergraduates**  
Dr. P. Karthikeyan  
Asst. Professor of ENT, Mahatma Gandhi Medical College & Research Institute, Pillaiyarkuppam, Puducherry
11. **Implementation of MCQs (Multiple Choice Questions) in routine formative evaluation of 6<sup>th</sup> semester MBBS students in Psychiatry, and creation of an MCQ bank.**  
Dr. B. Sivaprakash



Assistant Professor of Psychiatry, Mahatma Gandhi Medical College and Research Institute, Pillayarkuppam, Puducherry.

12. **Introduction of self learning as a group task**  
Dr. Karthikshree V. Prasad  
Lecturer, Mahatma Gandhi Postgraduate Institute of Dental Sciences, Puducherry
13. **Analysing the problems and improving skills in slow learners.**  
Dr. K. Ramadoss  
Lecturer in Oral Pathology, Mahatma Gandhi P.G. Institute of Dental sciences, Puducherry
14. **Buzz-sessions as active teaching learning method in physiology lecture**  
Dr. S.Velkumary  
Asst. Professor of Physiology, Puducherry Institute of Medical Science, Puducherry
15. **Assessment of Medical Teacher's attitude in accepting and implementing the (rapid) changes in medical education.**  
Dr. A. Arockia Philip Raj  
Asst. Professor of Psychiatry, Puducherry Institute of Medical Science, Puducherry
16. **Improving Communication Skills in Para clinical MBBS., Students using group Discussions & Role play.**  
Dr. R. Jayasree,  
Professor Pharmacology, Aarupadai Veedu Medical College, Kirumambakkam, Puducherry
17. **Effectiveness of Pre-test and Post-test in improving learning outcome of Lecture classes in surgery department**  
Dr. G.K. Venkatachalam  
Asst. Professor of Surgery, Aarupadai Veedu Medical College, Kirumambakkam, Puducherry
18. **Improving Communication skill in the students of P&SM during the Family Health Advisory Programme (FHAP)**  
Dr. Sonali Sarkar  
Assistant Professor of P & SM, JIPMER, Puducherry
19. **Group discussion in Paediatric Undergraduate Teaching**  
Dr. Deonath Mahto  
Asst. Professor of Paediatrics, JIPMER, Puducherry
20. **Tutorial as tool of learning method in the field of clinical anatomy for Ist MBBS students.**  
Dr. Sarasu. J  
Sr. Resident in Anatomy, JIPMER, Puducherry
21. **Student Information Board (S.I.B.) as a Means to Self/Small Group Learning Method for Undergraduate Medical Education**  
Dr. Ravindra Kumar M  
Senior Resident in Pharmacology, JIPMER, Puducherry
22. **Introduction of clinical quiz in assessment as a part of UG teaching in Department of Surgery, JIPMER**  
Dr. Debashish Nayak,  
Senior Resident in Surgery, JIPMER, Puducherry

**BOOK POST – PRINTED MATTER**

**TO**

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