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Programme

Thursday, June 21, 2001

Symposium: Pao Yue Kong Auditorium, G/F, Hong Kong Academy of Medicine
Lunch & dinner: Run Run Shaw Hall, 1/F, Hong Kong Academy of Medicine

8:30 – 9:00	Registration
9:00 – 9:30	AMEA Inaugural Ceremony
	SYMPOSIUM THEME: CURRICULUM REFORM AND DEVELOPMENT
9:30 – 9:55	**First plenary session:** Quality medical education at PUMC (P1) *Professor Chen Yuanfang*
9:55 – 10:20	**Second plenary session:** Curriculum reform: the road to postgraduate professional development (P2) *Professor Grace WK Tang*
10:20 – 10:30	Discussion
10:50 – 11:15	**Third plenary session:** Global trends in medical education (P3) *Professor Ronald M Harden*
11:15 – 11:40	**Fourth plenary session:** Curriculum reform and assessment (P4) *Professor John Bligh*
11:40 – 11:50	Discussion
11:50 – 12:00	Curriculum reform in clinical medicine in Capital University of Medical Sciences (OP1) *Professor Chen Yan*
12:00 – 12:10	Evolution of the medical curriculum: adventures in the two worlds (OP2) *Professor Hla Yee Yee*
12:10 – 12:20	Core curriculum design at the University of Santo Tomas, Faculty of Medicine and Surgery (OP3) *Professor Aurora F Bauzon*
12:20 – 12:30	MD curriculum renovation: PSU experience (OP4) *Dr Arnuparp Lekhakula*
12:30 – 12:40	First four years of new medical curriculum at Faculty of Medicine, the University of Hong Kong (OP5) *Professor Mary SM Ip*
12:40 – 13:00	Discussion

	SYMPOSIUM THEME: TEACHING, LEARNING AND RESEARCH
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14:25 – 14:35	The implementation of problem-based learning in Kyungpook National University School of Medicine and its evaluation (OP6) *Dr Bong-Hyun Chang*
14:35 – 14:45	Problem-based learning in the wards (OP7) *Dr Niv Patil*
14:45 – 14:55	Problem-based public health - beyond the classroom (OP8) *Dr GM Leung*
14:55 – 15:05	Student attitudes on a problem-based learning session in traditional curriculum (OP9) *Professor Asoka S Dissanayake*
15:05 – 15:30	Discussion
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16:00 – 16:25	**Sixth plenary session:** Changes in the medical school curriculum and licensure examination in Korea (P6) *Professor Sang-Ho Baik*
16:25 – 16:35	Community-based preventive medicine teaching for undergraduates of clinical medicine (OP10) *Professor Lu Yingqing*
16:35 – 16:45	Experiential learning in the HKU integrated undergraduate medical curriculum: the role and impact of the Patient Care Project (OP11) *Dr Richard Fielding*
16:45 – 17:00	Discussion
17:00 – 17:10	Developing a medical ethics and law core curriculum: the Hong Kong experience (OP12) *Dr Josephine Wong*
17:10 – 17:20	Integration of humanism into the medical curriculum (OP13) *Professor He Jia*
17:20 – 17:30	Laboratory practical program based on clinical problem: an approach to the integration of basic sciences and clinical sciences in medical education (OP14) *Dr Tri Hanggono Achmad*
17:30 – 17:40	Thoughts on the state and prospect of establishment of key courses of clinical courses (OP15) *Professor Lu Jiexiang*
17:40 – 18:00	Discussion
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Friday, June 22, 2001

Symposium: Pao Yue Kong Auditorium, G/F, Hong Kong Academy of Medicine

Lunch & dinner: Run Run Shaw Hall, 1/F, Hong Kong Academy of Medicine

Workshop 1: Function Room, 2/F, Hong Kong Academy of Medicine

Workshop 2: CAL Laboratory, LG1, Estates Building, 10 Sassoon Road

Workshop 3: Function Room, 2/F, Hong Kong Academy of Medicine

Workshop 4: James Kung Meeting Room, 2/F, Hong Kong Academy of Medicine

	SYMPOSIUM THEME: TEACHING, LEARNING AND RESEARCH
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9:25 – 9:35	The use of focus group interviews in Asian medical education evaluative research (OP16) *Dr TP Lam*
9:35 – 9:45	The utility of a simple post (OSCE) assessment feedback questionnaire in a clinical skills unit (OP17) *Dr Francis I Achike*
9:45 – 9:55	Needs assessment for staff development in the Colombo Medical Faculty (OP18) *Professor Rohini de A Seneviratne*
9:55 - 10:15	Discussion
10:15 – 10:25	A transitional course from high school to medical school in a new medical curriculum in Asia: how effective is it? (OP19) *Dr US Khoo*
10:25 – 10:35	Stress perception in first year medical students attending an urban medical school in Malaysia (OP20) *Dr Lakshmi Selvaratnam*
10:35 – 10:45	The importance of bridging courses in Asia – the Baqai experience (OP21) *Professor Peter Baillie*
10:45 – 11:00	Discussion
11:00 – 11:20	**Tea break**
	SYMPOSIUM THEME: EDUCATION AND INFORMATION TECHNOLOGY
11:20 – 11:45	**Eighth plenary session:** Information technology and medical education (P8) *Professor Ross Lazarus*
11:45 – 11:55	Sharing web-based learning materials (OP22) *Professor Roy Joseph*
11:55 – 12:05	The inter-med.org. virtual medical university project (OP23) *Professor David Riches*
12:05 – 12:15	The integration of web-based learning in the medical curriculum at the International Medical University (OP24) *Dr Ammuradha Radakrishnan*

12:15 – 12:25	Introduction of new simulator and new tool to teach clinical skills and OSCE (OP25) *Professor I Yoshida*	
12:25 – 12:35	A useful method of teaching traditional Chinese medicine (OP26) *Dr Yip Zhenyu*	
12:35 - 13:00	Discussion	
	WORKSHOPS	
14:00 – 15:30	**Workshop 1** Writing for Publication *Ms Addeane Caelleigh*	**Workshop 2** Use of IT in Curriculum Implementation *Professor Ross Lazarus*
16:00 – 17:30	**Workshop 3** Designing a Curriculum *Professor John Bligh*	**Workshop 4** Best Evidence Medical Education and Research *Professor RM Harden*
17:30 – 17:45	Closing Ceremony	

Plenary Presentations

QUALITY MEDICAL EDUCATION AT PUMC

CHEN Yuan-fang

Peking Union Medical College, China

1. Some problems exist in medical education in some medical schools in China: relative weakness in knowledge base, didactic teaching rather than developing ability, too much emphasis on specialties than on general medicine.

2. Peking Union Medical College (PUMC) runs an eight-year curriculum and is known for its sound tradition of quality education and the incredible number of medical leaders it has reared. In recent years we have been trying to integrate the traditional spirit with a contemporary sense in our educational activities.

3. We have also been doing hard to change the philosophy of education of some of our faculty, and to upgrade our teaching by "*Train the Trainers*".

4. The process of education at PUMC is characterized by:

   - Emphasis on knowledge base
   - Emphasis on basic training
   - Emphasis on developing problem-solving and life-long learning ability
   - Emphasis on student-centered teaching and active learning
   - Make full use of advanced technology and multi-media in teaching

CURRICULUM REFORM: THE ROAD TO POSTGRADUATE PROFESSIONAL DEVELOPMENT

Grace W.K. TANG

Faculty of Medicine, The University of Hong Kong, China

In the last 2 decades, many medical schools in the World have undergone curriculum reform. Such teaching activity appears to be a fashion and trend that few medical schools can resist, or dare to resist, for many Registration Authorities feel that there needs to be changes made to existing curricula. The goal of the curriculum reform largely focused on the preparation of medical students to become generic doctors who are capable of further professional development.

The Faculty of Medicine of the University of Hong Kong launched its curriculum reform in 1997. Essentially, the new curriculum aims to improve on three areas : knowledge, skills and attitudes. The New Doctors are prepared to take up the many challenges in the 21st century that are related specifically to these 3 areas of reform and improvement.

Historically, graduates from medical schools become doctors. Their career path has been set as a few years of hospital training followed by setting up of their own private solo practice. Some are trained to be specialists in a particular field and they obtain such higher professional degrees largely from Britain. Following the formation of the Hong Kong Academy of Medicine in 1993 and the establishment of the Specialist Register by the Hong Kong Medical Council, much of the higher professional training are undertaken by the various Colleges of the Academy through the training posts in the Hospital Authority, the major training ground in Hong Kong. Currently Hong Kong has about 10,000 medical practitioners on the General Register and some 41% of them are working as well as obtaining their professional training in the Hospital Authority. A very small number of doctors are staff-trainees in the 2 University Medical Schools and the Department of Health. Up to July 2000, the total number of doctors who are Fellows of the Academy of Medicine and who can be recommended to the Specialist Register of the Hong Kong Medical Council is 3500. A large proportion of doctors practising in HK are non-specialists. They will not be able to find again training opportunities in the Hospital Authority, as its turn-over rate is low and every year, some 350 new graduates look to it for employment to pursue further professional development so as to become Academy Fellows and Specialists.

Needless to say, competition to get into the training system is keen and to get into the desired specialty training demands top-class performance both academically and during internship. The training programs are sharpened to be on par with the international standard and there are many conjoint examinations with Britain and Australia. One can readily see that the demand on knowledge, skills and attitudes for the New Doctors is escalating.

To remain on the Specialist Register and be an Academy Fellow, continued medical education (CME) is a requirement. A case is built for compulsory CME for all medical practitioners in Hong Kong, and it is time to move into continuous professional development (CPD) that entails interactive learning, quality assurance, skills enhancement, just to mention a few. It is prudent for all medical practitioners to be life-long learners, a concept well inculcated in the New Doctors of the New Medical Curriculum.

As medical science advances by leaps and bounds, many New Doctors may choose to become researchers, and they will be in a better position to perform those researches most relevant to the Community they serve, for they understand both the basic sciences and the clinical diseases. Curriculum reform has allowed for opportunities to get started in the research frontier. The Special Study Modules and the Master of Research in Medicine will no doubt offer another path in the professional development of the New Doctors that hitherto has been mostly single-laned. The time has come for the New Doctors to venture into new pathways.

Globalisation of medicine and integrative medicine is in time to come. Equipped with the solid foundation in knowledge, skills and attitudes, the New Doctors will be capable of extending and furthering their professional scope through the determination of being life-long learners, a culture that is meant to develop with the Curriculum Reform.

GLOBAL TRENDS IN MEDICAL EDUCATION

Professor Ronald M Harden

Centre for Medical Education, University of Dundee, UK

This is a time of powerful challenges and exciting potentials for medical education. In this presentation a vision for the future for medical education is presented with regard to the curriculum, new learning technologies, assessment and finally the concept of professionalism in medical education.

1 Curriculum planning and development

- Outcome-based education
- Curriculum mapping
- Task-based learning
- Study/training guides
- Globalisation

2 Learning technologies

- Increased portability of computers
- Internet as a key resource
- Development of simulation and virtual reality
- The virtual medical school

3 Student assessment

- Continuing and more sophisticated use of the OSCE
- Portfolio assessment
- Outcome-based assessment
- Mastery assessment
- Self assessment

4 Professionalism in medical education

- Best Evidence Medical Education
- The teacher as a professional and the roles of the teacher
- Accredited training in medical education for teachers
- Appointment of staff with educational background to support teaching

5 Conclusions

- Collaborative learning
- Blended learning
- Dynamic adaptive learning

CURRICULUM REFORM AND ASSESSMENT

John BLIGH

Peninsula Medical School, UK

Many medical schools across the world are changing their medical teaching programmes in line with new educational ideas about curriculum and in response to developments in health service delivery. This paper discusses some of the main factors shaping these changes and focuses on the relationship between student learning, clinical practice and assessment. In particular, the assessment cycle, new methods of assessment, and the importance of relating assessment strategies to desirable learning outcomes are highlighted. One of the major conclusions of the paper is that staff development in assessment methods is urgently required.

PBL: A HINDRANCE TO LEARNING FOR ASIAN MEDICAL STUDENTS?

M.C.E. GWEE, H.E. KHOO, R. CHHEM, and P. BALASUBRAMANIAM

Faculty of Medicine, National University of Singapore, Singapore

Problem-based learning (PBL) was implemented more than three decades ago as a radical educational initiative of McMaster university medical school and has since been adopted and adapted for use by many medical schools in the world. More Asian medical schools have also implemented PBL within their undergraduate curriculum in recent years. The main instructional strategy used in PBL is that of intensive small group tutorials with a major emphasis on the active involvement of students in the *learning (problem-solving) process per se* (and not just content knowledge acquisition). The pedagogical design in PBL is, therefore, aimed at encouraging and empowering students to take greater initiative and responsibility to direct and to manage their own learning and, consequently, to lay the foundations for a lifetime of continuing education. Thus, in the PBL environment, students are required to actively participate in peer teaching and learning through *open discussion* (talking, listening, asking questions, and critically analyzing ideas and issues and exchanging diverse viewpoints), yet observing the rules of engagement (code of behaviour) associated with such learning through *social interaction.*

PBL therefore represents a major shift in educational paradigm from highly traditional, ritualistic and teacher-centred instruction in large groups to highly student-centred and active-interactive learning in small groups. In the implementation of such an educational strategy, it is imperative that there should also be a radical shift in the *mindsets* of Asian students to overcome the widely perceived *cultural reticence* often displayed by Asian students in a small group learning environment. In this context, will the PBL environment create more anxiety, tension and stress in the education of Asian medical students? Moreover, will the cultural norms and cultural comfort zones in Asian communication styles impose serious constraints on and stifle the interactive discussion style so critical and essential in PBL? Will PBL, then, pose more as a hindrance to, rather than a motivation for, learning for Asian medical students? These issues will be discussed through a review of our own experience, the experience of other Asian medical educators and the advocates of small group learning.

CHANGES IN THE MEDICAL SCHOOL CURRICULUM AND LICENSURE EXAMINATION IN KOREA

Sang-Ho BAIK

Seoul National University, Korea

There have been a number of significant changes in the medical school curriculum and licensure examination in Korea over the last three decades. My discussion focuses on such changes, which I have observed or have brought about in part in my pursuit for the improvement of medical education in Korea. Major revisions in the medical school curriculum include integration of courses, introduction of elective programs, and adoption of the problem-based learning (PBL) method. A series of recent studies shows an upward trend in the adoption of integrated courses, the elective programs. An introduction of problem-based learning (PBL) method stimulate the rapid spreading in many new medical schools as well as in the more traditional medical schools.

To be a physician in Korea, one has to pass the national medical licensure examination. A private organization has taken over the responsibility of administering the examination from the government since 1994. Delegation of responsibility to a private organization has been pivotal in bringing about significant changes in the examination system, including reduction of test subjects and introduction of a new format and content outlines of the coverage of the examination.

Various developments in the licensure examination system and the positive effects of such developments in the curricula of medical schools are briefly discussed.

PEER REVIEW IN MEDICAL EDUCATION

Addeane S. CAELLEIGH

Editor, *Academic Medicine*

Peer review is the mechanism chosen by science to determine quality. In one form, it is used to decide who receives research grants; in another, editors use it to choose which papers to publish. And the use of peer review is now considered a basic requirement of high-quality journals, along with an understanding that some systems of peer review are better than others. Although the various sciences and disciplines agree on the basic principles of journal peer review they have developed different approaches. These differences can be strongly felt in emerging fields, multidisciplinary fields, and interdisciplinary fields because the expectations are not clear and not clearly shared. Peer review presents particular problems in such areas—for authors, reviewers, and editors. Medical education, calling as it does upon researchers from many scientific and disciplinary backgrounds and trained in various methods, is one of these areas. Peer review is difficult in medical education where the differences make peer review difficult.

Despite its central role, however, many in medical education—like their counterparts elsewhere—do not understand peer review well. For example, until recently editors had very little research that examined the nature and workings of peer review and therefore had only anecdotal evidence or their own intuition to guide them in establishing policies, practices, and standards. The past 20 years has seen an enormous grown in relevant research by journals, and editors are accumulating the knowledge they need for evidence-based changes in their peer review systems. (Three international congresses have been held, with a fourth scheduled for Fall 2001). Second, authors often do not understand what editors expect or how journals' systems work. This is partly because journals operate—and rightly so—in confidentiality and with considerable autonomy. Therefore journals differ widely in their policies and procedures, with the result that authors face the bewildering array of requirements. And behind the requirements lies a review system they do not know or understand. Third, the reviewers also often know little of what is expected of them. They too face a wide range of expectations, often unexpressed or poorly articulated, at journals, and yet the resultant reviews are considered by the community to be the core of the system.

Most members of these groups—authors, editors, and reviewers—receive no training in how to fulfill their role in peer review, despite the role of advanced education at the core of medical education and despite the centrality of peer review. Authors are not taught how to write reports of the research they do, even though publishing those reports are the primary measure still used for promotion and tenure, at least in North America. Reviewers are not trained in writing reviews, even though their reviews will seriously affect the fate of scientific reports and the careers of their peers. And newly appointed editors take up their responsibilities without any introduction to the work other than its mechanics, even though there are at least some avenues of preparation with their fellow editors.

The peer review system cannot be completely open (although a few editors would argue otherwise), but it should be made as transparent as possible while allowing appropriate review and decision making. All groups—authors, reviewers, and editors—need to work together to promote the necessary training, diffusion of information, and cooperation that will support healthy peer review in medical education.

INFORMATION TECHNOLOGY AND MEDICAL EDUCATION

Ross LAZARUS

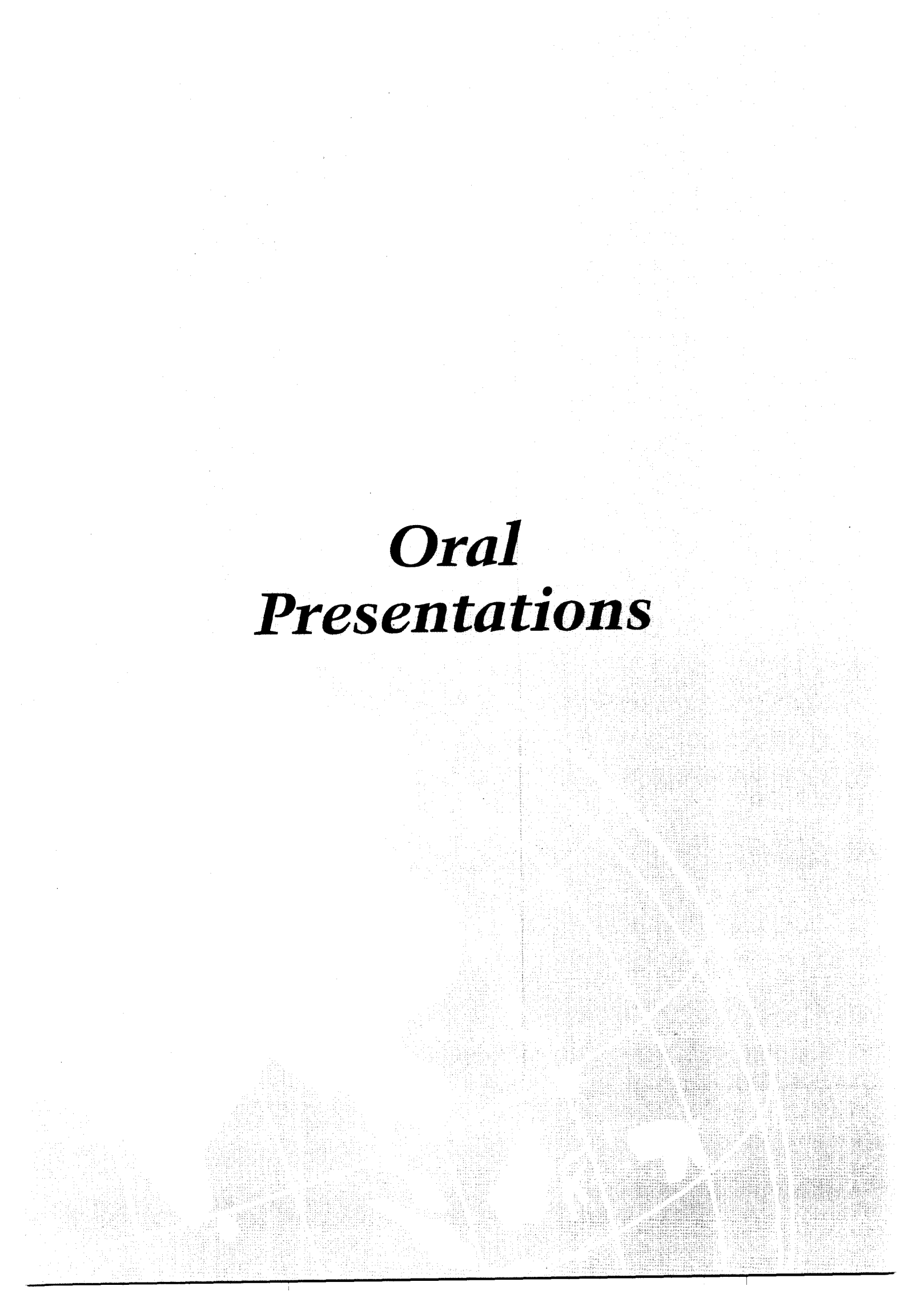
University of Sydney, Australia

Information technology (IT) has become established as an integral part of the practice of medicine. The rapidly growing range of free electronic information resources such as PubMed and the many electronic journals are a rich source of teaching and learning materials for students and practitioners alike.

While IT offers many promises and opportunities for enhancing the educational experience of medical students, it also offers a variety of challenges. Successful integration of IT into high quality medical education remains an elusive goal for many institutions. There are some notable success stories of which the University of Sydney Medical Program (USMP) is one. Much of the material presented in this session will be based on experience gained in the planning, implementation, running and maintenance of the USMP.

Since IT infrastructure is expensive to build and to maintain, it is important to focus on projects yielding maximal returns in terms of educational outcomes and other tangible benefits. In medical education, there is little merit in IT as an end in itself, since it is no more than a set of tools. If carefully chosen and used, these tools can support and facilitate high quality teaching and learning, but IT is neither necessary nor sufficient for achieving these aims. The core business of medical schools is to produce high quality medical practitioners. IT must be integrated into the delivery of a coherent, well designed curriculum if it is to help us achieve this goal.

Oral Presentations



CURRICULUM REFORM IN CLINICAL MEDICINE IN CAPITAL UNIVERSITY OF MEDICAL SCIENCES

CHEN Yan, XIE Peijing, YU Shuyan

Capital University of Medical Sciences, China

I. Introduction

In order to meet the needs of the coming century, the Educational Department of the state puts forward the guide lines for higher education reform as follows: to carry out the guiding principles of education, change the ideology, strengthen quality education, reform contents and methods, and raise the teaching quality. As the local key medical institute, Capital University of Medical Sciences (CUMS) endeavors to serve the developments of Beijing's society, economy, science and technology and to provide the first class service with the first class medical skills and personnel in Beijing.

However, medical undergraduates trained under the present curriculum are insufficient to meet the requirements of the public and the medical work in knowledge, skill or attitude. Therefore, to carry out the reforms of higher education, to improve the curriculum and to promote the quality education are important problems to be solved.

II. Guiding Principles of New Educational Mode

The guiding principles for the new curriculum are as follows: 1) Meeting the target of medical talent education in the 21 Century. 2) Meeting the needs of Beijing's medical service development. 3) Carrying out broader range education under revised specialty contents. 4) Overcoming the malpractice of the present educational mode, combining theory with practice, and making a comprehensive arrangement of the courses. 5) Taking the clinical application education as the major purpose and laying special emphasis on quality education and clinical straining. 6) Developing the features of the local medical institution.

III. New Educational Mode

The new mode of education takes the branches of learning as the center of basic medical courses, breaks off the limits of disciplines in delivering certain clinical courses and takes diseases and problems as the core of training, strengthens the inter connection of basic and clinical training, and enhances the training in foreign languages, computer, research aptitude and clinical skills.

IV. New Curriculum Establishment

1. ***Decreasing Teaching Hours for Required Courses and Increasing Optional Courses***
   After the adjustment of the curriculum, the time for required courses was reduced from 3739 hours to 3443 hours, with 296 hours or 8% decrease. At the same time, optional courses was increased from 30 to 73 courses.

2. ***Strengthening the Establishment of Discipline Group of Life Science***
   The university takes cell biology, genetics, biochemistry, immunology, and molecular biology as the key courses for special investment and construction and has offered two new courses as molecular biology and neurobiology.

3. ***Enhancing Education of Humanity and Social Sciences***
   (a) The course of Marxist-Leninist theory and the course of ideological and moral education are delivered with special care.
   (b) Courses of humanity and arts are given as follows: scien-tech writing, introduction of public relations, health condition of the country, sociology, aesthetics and popular music.

4. ***Enhancing Education of Preventive Medicine and General Practice/Family Medicine***
   Courses as social medicine, rehabilitation medicine and general practice/family medicine are offered to develop students' health maintenance skills for the community.

5. ***Reorganizing Basic Courses with Clinical Courses for Better Combination***
   (a) Contents of certain disciplines are taught in separate sections, such as, a part of topographic anatomy is taught in surgery.
   (b) Certain clinical issues are discussed in basic medical courses to deepen students' understanding and to strengthen the concentration between theory and practice.
   (c) Three optional courses: clinical pathology, clinical immunity and clinical pharmacology are offered in the period of clinical education.
   (d) Psychology is taught at the early stage of mental health and psychiatry.
   (e) Disease or problem centered approach is carried out for teaching certain diseases in both surgery and internal medicine.

6. ***Enhancing English and Computer Education***
   (a) Special emphasis is laid on raising students' ability of practical communication in English and on changing the education for examination to that for application. Students are trained for practical skills in reading, writing, listening and speaking. Instructors of medical courses are required to teach students the English medical terms of the discipline. A teaching and research section has been established to offer the English course for clinical medicine.
   (b) Special investment is made in computer hardware construction. Computer training is well organized and managed.

7. ***Clinical Education***
   (a) Special emphasis is made on the construction and normalization of clinical teaching bases. "Basic Standards for Clinical Teaching Base Construction of CUMS" has been established to normalize and systematize our clinical teaching base construction. More investment has been made to improve the clinical teaching conditions.
   (b) Stress is laid on students' clinical skill training in following aspects:
      i. Practice handbooks for internal medicine, surgery, gynecology, pediatrics have been compiled.
      ii. An outline of graduation practice has been established to clarify the practice requirements.
      iii. Special attention is paid to important stages of practice teaching as ward-round teaching, small lectures, medical record writing, case discussion and practical operation.
      iv. A unified graduation skill test system is established for graduates' clinical skill assessment.
      v. Testing Center for Clinical Skills of CUMS has been established for the investigation of objective and impartial assessment of students' clinical skills. We carried out the research project "C.T.R.P Case Bank Establishment and Clinical Skill Assessment".
      vi. Enhancing Reform of Laboratory Class
      Both the system of the laboratories and the teaching contents of laboratory classes have been reformed.

EVOLUTION OF THE MEDICAL CURRICULUM: ADVENTURES IN THE TWO WORLDS

HLA Yee-Yee[1], WIN May[2]

[1]The International Medical University, Malaysia
[2]Keck School of Medicine, University of Southern California, USA

Evolution in Myanmar

The medical curriculum at its inception in 1923-24 was designed on a pattern similar to that in British medical schools. However, after Independence (1948), medical educators became aware that many priority health problems were different from the West, and the curriculum gradually underwent change. The long trek of evolution in Myanmar is traced. Awareness of the profound importance of educational science was felt in Myanmar as early as 1960s, when the World Health Organisation held national faculty development workshops in educational science. As early as the 1970s faculty were sent to the University of New South Wales and the University of Southern California for training in medical /health professionals education. Numerous WHO-sponsored and intra-Institute workshops in educational science for faculty of all three Institutes of Medicine followed. Concurrently, Committees were established at the national level to incorporate the principles of innovative teaching/ learning into curriculum delivery. Both authors were deeply involved in the evolution process, serving as junior members (and ultimately as Chairpersons) of the respective Medical Education Units, and Chairperson/Secretary of the National Committee for Innovative Teaching/Learning. Although constraints in material resources has impeded some evolutionary changes, major changes have been achieved over the years. Early exposure to the community was achieved as early as the 1960s, and 1966 saw the first batch of students (the authors included) sent into the villages for a 3-week period, to study health care delivery at the grassroots level. Community orientation in the curriculum began in 1973. In the late 1980s faculty were trained in problem-based learning (PBL) and committees set up to implement PBL in the curriculum. Problem – solving skills were introduced in the junior years, using data interpretation and paper cases. A study on the use of continuing medical education as an input to curricular change in the medical schools was carried out in the 1990s with support from the WHO. The graduates' needs for CME as well as their self-evaluation of performance was used as input to keep the curricula dynamic and responsive to needs.

Evolution in Malaysia

The International Medical University (first founded as the International Medical College in 1992) is fashioned after the School of Medical Sciences, Universiti Sains Malaysia. The latter, founded in 1984, is the first school in the SEA region to adopt the PBL curriculum. The IMU is the only medical school in Malaysia which uses PBL as a major teaching/learning tool from the first Semester. Students are exposed to 58- 60 PBL triggers in the 5 Semesters in IMU, after which they are awarded an Advanced Diploma in Medical Sciences. (The clinical years are completed in the IMU Clinical School or 21 Schools in the UK, US, Australia, New Zealand, Canada). The ongoing evolutionary process of fine- tuning the PBL in IMU is presented.

CORE CURRICULUM DESIGN AT THE UNIVERSITY OF SANTO TOMAS FACULTY OF MEDICINE AND SURGERY

Aurora F. BAUZON

Faculty of Medicine and Surgery, University of Santo Tomas, Philippines

The University of Santo Tomas is the oldest university in the Philippines and its Faculty of Medicine and Surgery is one of the top medical schools in the country. Its curriculum has been very traditional, learning is teacher-centered, and students have been passive and teacher-dependent. Subjects were taught by discipline, while clinical teaching was mostly disease-based instead of complaint-based, hospital-based and minimally community-based.

However, advances in medical sciences resulted in explosion of new information. In 1998, the UST FMS decided on a paradigm shift from a traditional to an innovative curriculum.

The Department of Medical Education planned and worked intensively for the past 3 years. Faculty and student resistance were addressed by continuous training workshops. While preparing for the changes, the existing curriculum was gradually modified in SY 1999-2001 by synchronization of topics and introducing small group tutorials (SGT's). It was decided to adopt a curriculum that is integrated, and organ-system based. What followed next was deciding the core content of the modules, and allotting the time for each.

There are 21 modules for years I, II, III each module consisting of SGTs, Skills Lab practice, correlates, and individual study. Classroom time is reduced.

Year I will start with orientation and Medical Informatics. The module of Man in Health and Disease introduces the concept of health as a manifestation of physical and mental or psychospiritual homeostasis. Topics included are basic anatomy, histology, biochemistry, physiology, pathology, immunology, laboratory medicine and the family in health and disease. The module on the Art and Science of Medicine emphasizes communication and clinical skills essential to the patient/doctor relationship. Reproductive and Child Health, and the Infectious and Tropical Diseases Modules are taken in the second half of Year I.

Year II will start with integrated study of the systems, to last until the first semester of Year III. The last semester of Year III will be devoted to selected integrated problems and community-based study.

M.D. CURRICULUM RENOVATION: PSU EXPERIENCE

Arnuparp LEKHAKULA

Prince of Songkla University, Thailand

The Faculty of Medicine, Prince of Songkla University, was established in 1972 according to the Third National Economic and Educational Development Plan. It began with traditional, discipline-based 6-year curriculum. This paper will address our experience in curriculum development and implementation. In 1988, problem-based learning (PBL) concept was introduced and adopted. Initially, it was modified and implemented by incorporating into 2nd and 3rd years of conventional curriculum, and then reorganized into Integrated Medical Sciences for 2 weeks in each semester. The need for change in the curriculum was therefore clearly recognized and inevitable. In 1999, after major revisions and paradigm shift of medical education trends, a new medical curriculum has been implemented in our school. It is organized into 3 phases: 1 year in Phase I, 2 years in Phase II and 3 years in Phase III.

Hybrid PBL is the major approach for Phase II with the conceptual frameworks of body organ systems-oriented, horizontal and vertical integration, problem-oriented, relevant core content, early clinical exposure, student-centered and learning process focus. The most of total time are allocated to small group activity (30%) and self-directed learning (40%). Didactic lectures are reduced to about 15-20%. Preliminary evaluation showed positive attitude of teachers towards the new approach. Response from the first batch of students highlighted that PBL assisted them to motivate learning and to develop problem solving skills, communication skills, self-directed learning and information searching skills, opinion expression and presentation skills, interpersonal relationship and team work skills.

Following the Phase II curriculum modification, Phase III has also been reformed. This phase is based on task-based learning adjunctive with PBL and life-cycle approach. The new Phase III curriculum has been launched since April 2001.

The major keys of successes are full support of the Dean and the Faculty Administrative Board, the need for changes, the cooperative climate and commitment of the faculty members, and the central governance. The preparation of the staff and the students are also essential for the new curriculum implementation.

FIRST FOUR YEARS OF NEW MEDICAL CURRICULUM AT FACULTY OF MEDICINE, THE UNIVERSITY OF HONG KONG

Mary S.M. IP, N.G. PATIL

Faculty of Medicine, The University of Hong Kong, China

The Faculty of Medicine of the University of Hong Kong was established in 1887 and introduced a New Medical Curriculum in 1997 at its 110th anniversary. The medical curriculum emphasizes on the integration of basic and clinical sciences, problem-based learning and early clinical contacts. There are four curriculum themes, namely: Human Biology in Health and Disease, Doctors and Patients, Medicine and Society, and Professional Development. The objective of the curriculum is to conscientiously train our graduates to become compassionate, caring, competent doctors; and life-long learners who would continue to develop their professional skills to provide a care of high standards.

Various committees and groups have been established under the umbrella of the Undergraduate Education Committee of the Faculty to prepare the curriculum outline and the syllabus. The implementation process include PBL tutor training workshops, continuous evaluation and assessments, creation of CAL and clinical skills labs., PBL tutorial rooms and development of on-line handbooks, just to name a few.

The first graduates of the new curriculum will qualify in June 2002 to begin their one-year internship. Initial observations suggest that the students have coped well with the introduction of PBL and are able to demonstrate their basic clinical and analytic skills much earlier in the course than their predecessor of the old curriculum.

The author will highlight in the presentation achievements, shortcoming and difficulties in implementation of the New Medical Curriculum.

THE IMPLEMENTATION OF PROBLEM-BASED LEARNING IN KYUNGPOOK NATIONAL UNIVERSITY SCHOOL OF MEDICINE AND ITS EVALUATION

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The effectiveness of Problem-based Learning (PBL) in medical education has already been acclaimed widely. Representatives of the Curriculum Committee at Kyungpook National University School of Medicine paid a visit to McMaster University School of Medicine in Canada in May, 1994 in order to learn mechanics and effectiveness of PBL in its medical education and they were impressed by the efficacy of PBL. Soon after that the school launched a pilot PBL tutorial for two years from 1994 through 1996 (4 semesters) as a non-credit course for senior, junior and sophomore in medical school during one semester each, to introduce PBL to faculty members and students as well. After the pilot, opinion survey on PBL from both faculty and students revealed affirmative for PBL from 55.1% of seniors, 61.4% of juniors and 83.9% of faculty members. The faculty body at medical school was then encouraged by the pilot experience and decided to include the PBL as the part of medical education reform.

During the fall semester in 1998, the senior at pre-medical course was given PBL experience to prepare for implementation of PBL at school of medicine. The PBL was implemented as an essential 2-credit-hour course in each semester commencing in 1999 academic year to the freshmen class throughout the year; it was expended to the sophomore in 2000 and to the junior in 2001.

Although there had been initial excitements of over expectations, confusion, and disappointments from faculty members and students, however, majority opinion of both parties on continuation of PBL was positive. The issues to be settled are preparation of study cases, students learning resources, and method of evaluating students' performance.

The PBL was started as an essential course in medical school in 1999 academic year after 4 years of preparation and on the basis of our interim evaluations the following conclusions were made: it's been our consensus that students seem to follow the objectives of PBL and new PBL tutorial has well been accepted by students and enhancing the program by correcting currently known weaknesses, the PBL tutorials could further be expanded to be a major modality of teaching in our medical school.

PROBLEM-BASED LEARNING IN THE WARDS

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The Faculty of Medicine of the University of Hong Kong introduced PBL as an important component of students' learning in its New Medical Curriculum instituted in September 1997. Students, in their first three years of PBL tutorials, have discussed nearly 55 paper-case scenarios. A project to convert these paper-cases into video-based scenarios has been undertaken at the faculty.

There is an unfortunate perception that the process of PBL tutorials may not be suitable for clinical setting. The truth is that once students have mastered the philosophy of the PBL process in first two years, they are quite comfortable in applying PBL principles in learning from clinical problems of real patients at the hospital.

The authors in their presentation will demonstrate the process of "PBL in the Clinical wards" with an aid of video presentation.

PROBLEM-BASED PUBLIC HEALTH – BEYOND THE CLASSROOM

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Context

At the University of Hong Kong, a new problem-based undergraduate curriculum has been phased in since 1997. There has also been a move towards more community-oriented teaching. Our objective was to develop a public health syllabus for year 3 medical students that aligns with these learning philosophies.

Why the idea was necessary

Problem-based learning (PBL) cases historically have tended to neglect the need to connect with students' readiness to learn with the exigency of real-life situations and orient their learning by concrete life tasks, which involve the translation of knowledge in the classroom into real-life action. This is of particular concern in the field of public health, where advocacy and community-oriented action are pillar functions of the discipline.

What has been done

The main mode of learning is through a problem-based public health (PBPH) case, similar to a traditional PBL case. In each case, we introduce local topical public health issues through the microcosm of a clinical vignette, progressing from the individual to the community. In addition to the usual benefits of the PBL method, the novel focus requires each group of students to submit a collaborative "output" to present its findings and views, and to advocate for the particular health topic under discussion, thus fulfilling the real-life behavioural objectives previously defined. We adopt a deliberately open-ended attitude towards the exact format of the output and encourage students to be creative in their approach.

Evaluation

Student outputs have included letters submitted to academic journals (n=2), newspapers (n=11) and government agencies (n=9), signature campaigns (n=1), mock radio phone-in programmes (n=3), and prototype social marketing advertisements for both the broadcast (n=3) and print media (n=3). Students' (N=320) overall mean grade was 80.4±15.1% for in-course assessments. Eighty-eight percent of students found the module useful or very useful, while 85% were either satisfied or very satisfied that the PBPH cases had adequately addressed the pre-specified learning objectives.

STUDENT ATTITUDES ON A PROBLEM-BASED LEARNING SESSION IN TRADITIONAL CURRICULUM

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Introduction

Problem-based learning (PBL) is a student centered learning teaching tool that is considered more suitable for training medical students than traditional tutorials. The value of having PBL sessions within a traditional subject based curriculum has been questioned, more so in an Asian context. The medical school at Ragama follows a traditional curriculum with students being admitted directly from secondary school where the emphasis has been on a rote learning.

Method

The study was carried out during the lecture series on endocrine system in the second year of the undergraduate medical course.

Just after the lectures on thyroid gland two sessions of PBL on a patient with malaise, intolerance to cold and an enlargement in the neck were carried out. Each session lasted for two hours with an interval of one week between the two. One hundred and sixty-four students were divided in to six groups and each group was assigned a staff member (the facilitator). Staff members came from departments of Anatomy, Biochemistry and Physiology.

The first session was used to identify the relevant study areas and to generate learning objectives/questions. In the second session, the students presented their findings and discussed the answers to the questions that they generated in the first session. Each student was allowed a five minutes presentation.

At the end of the second session a questionnaire was administered to the students to determine their attitudes to the PBL sessions.

The questionnaires were answered anonymously but students were asked to indicate their grade at the continuous assessment in Physiology held about six weeks before the PBL. The data were entered into a database and analyzed using Epi 6.

Results

One hundred and seventeen students (71% of total) returned completed questionnaires. There were 60 male and 57 female students (out of 85 male and 79 female).

Over 75% reported needing three or more hours of preparation for their presentation. Females reported using more time than males. (χ^2= 7.61;p=0.055)

The majority of students reported using only the recommended subject textbooks. 20% accessed the Internet and 33% referred to journal articles listed as guides.

Over 73% agreed that the PBL was a useful learning exercise but only 48% reported learning little new information. Less than half preferred the PBL to regular subject-based tutorials. The majority was against reducing the number of lectures and replacing them with PBL sessions.

Analysis of trends showed that male students were more in favour of PBL sessions than females (χ^2= 7.35;p=0.006)

More than half of the group agreed that the facilitator developed many of the questions. The difference between tutorial groups for this aspect did not reach statistical significance. Most students felt comfortable speaking in front of the class and said the sessions improved their communication skills.

Conclusions

PBL sessions do have a place even in a traditional curriculum but unless material covered in this is examined, students lack little motivation. When PBLs are planned the information given in lectures should be reduced to encourage more student centered learning. Males tended to show a greater preference for PBLs. This may be because in an Asian culture females are less assertive and less likely to stand up in front of a group to present their ideas.

COMMUNITY-BASED PREVENTIVE MEDICINE TEACHING FOR UNDERGRADUATES OF CLINICAL MEDICINE

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In order to meet the needs of medical education adapting to the health care and development of medical science in 21st century, to enhance the concept of prevention among medical students and to cultivate them to be a personnel who will possess the knowledge and technology of health promotion, disease prevention and treatment, rehabilitation and health care, the teaching of preventive medicine has a very important significance, and our university has done as follows:

1. Curriculum

The characteristics of the new curricular system are as follows: the frame of original isolated subjects (including hygiene, epidemiology, health statistics, etc) has been integrated together. Prevention of three levels has been brought into most discipline, so that preventive medicine has been penetrated into the whole course of medical education. The education of concept of prevention and the concept of health for all have been further enhanced for the students of clinical medicine. This is beneficial for education of quality.

2. Contents of the textbook

The textbook of preventive medicine has been published in three editions. The guiding principle has been focused on the basic attitude of multitude-environment -health in nowadays-scientific ideology of preventive medicine. It reflects the new bio-psycho-social medical model. The basic knowledge includes factors influencing human health, different scientific technology controlling the hazardous factors for health, measures of social health, self care of individuals and national strategy and measures of health care, as well as basic principle, method and technology in health statistics, epidemiology, and social medicine.

3. Establishment and strengthening of teaching base and enhancement of social practice of preventive medicine

Establishment of urban and rural community teaching bases is the indispensable guarantee for the students joining social practice concerning preventive medicine. By way of social practice, the medical students mastered various basic methods, such as investigation and design, community mobilization, community diagnosis, implementation of survey, statistics and analysis of data, writing of papers, etc, so that their theoretical knowledge was further consolidated, and their ability of discovering and solving problems and serving the community was elevated a lot. Through social practice, it has been further identified that the model of service teaching research was feasible and beneficial for cultivating the concept of multitude-environment-prevention of the students and the idea of serving the goal of the preventive strategy.

EXPERIENTIAL LEARNING IN THE HKU INTEGRATED UNDERDRADUATE MEDICAL CURRICULUM: THE ROLE AND IMPACT OF THE PATIENT CARE PROJECT

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Background

In 1990, this Department introduced experiential community and psychosocial learning in the undergraduate medical curriculum. Crucial to this was the development of first year patient contact involving pairs of students meeting and following a patient over eight months spanning the first and second pre-clinical years. This Patient Care Project, PCP, was incorporated into the NMC in 1997, continuing to evolve to provide students with contact linking doctor with patient to deepen understanding of health determinants and illness consequences. Students complete both personal diary to aid reflection and analysis of their impressions and experiences and a problem-oriented patient record (POPR) to introduce medical record keeping.

Aims

This paper outlines the PCP and reports on students' and participant patients' responses to the PCP.

Methods

Following each iteration of the PCP, patient participants complete a telephone interview detailing students' performance, attitude and manner during the PCP. Students complete a series of 4-point scales addressing different aspects of the activity.

Results

Over 89% of students (n=153/170) reported the PCP was useful or very useful for learning about psychosocial aspects of patient care; 92% felt PCP was useful or very useful for learning about patient-centred communication and 68% of students felt that the objectives had been met most or all of the time. 98% of students enjoyed or very much enjoyed the four visits. About 76% of students reported learning a lot from their patient's experience. 64% percent of students felt the POPR was very helpful in learning about patient's health-related information, but 52% encountered some difficulties completing POPR items. 66% of students believed that writing a personal diary was an effective way to reflect on their learning experience. 20% were very satisfied and 72% satisfied with tutor performance. Patients' responses showed a high degree of satisfaction with the PCP.

Conclusion

Early patient contact in the form of a longitudinal patient follow-up is an excellent learning vehicle for psychosocial and community aspects of good and poor health.

DEVELOPING A MEDICAL ETHICS AND LAW CORE CURRICULUM: THE HONG KONG EXPERIENCE

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It is now increasingly recognised that ethics and law are essential components of a medical curriculum. In the University of Hong Kong Faculty of Medicine, we have designed and implemented a core curriculum in medical ethics and law, within a medical curriculum based on Problem-Based Learning. In this paper, we describe the development of our curriculum, which is horizontally and vertically integrated into the five years of the course and tailored according to the students' clinical maturity. We discuss our experience in the context of (1) developing novel learning settings; (2) faculty development; (3) balancing Eastern and Western values when teaching ethics. Future challenges include exploring methods of student assessment and evaluation of the course.

INTEGRATION OF HUMANISM INTO MEDICAL CURRICULUM

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As medical education adapts to changes in health care and reporting requirements, it is important to realize that medical school should producing a more humanistic doctor in the new century. In the current project funded by the World Bank, our president directed the project group to examine this issue and modify our undergraduate medical curriculum. The "Humanistic Medicine" planning group, as one group in the project, consisting of our university curriculum planners, faculty, medical education researchers, worked together to review our existing course materials, curricula from other medical universities, journal articles, and other feedback from faculty and students.

The "Humanistic Medicine" planning group defined a humanistic doctor, who understands patients as people and considers their psychological and social features in his or her assessment and treatments, who is compassionate and ethically sensitive, and who communicates compassion and sensitivity warmly and effectively to patients. Main projects in place for the 2000-2001 academic year in pre-clinical curriculum in our university include:

1. Introduction to Clinic Medicine Course was given to year 1 medical students. The Course topics included doctor-patient relationship, communication skills, health promotion and prevention, death and dying, and how to learn medicine. The course materials included the some course materials in English, provided by the University of Arkansas for Medicine Science in the United States. The course also used problem-based learning and small group discussion methods to convey medical humanism and facility students' life-long learning.

2. Integrated curriculum in place of discipline-based curriculum had been developed and implemented in year 1 and year 2 medical students. Students had been exposed to clinical medicine earlier than in the past. It also facilitated medical students' self-learning, creativeness, and critical thinking.

3. More than 50 elective courses had been developed. The elective courses related to humanism included sociology, Law, Chinese literature, art and music, create psychology, personal communication skill, health education, medical information gathering, medical history and so on. The elective course was given by the faculty both in our university and in other universities in Chongqing City.

LABORATORY PRACTICAL PROGRAM BASED ON CLINICAL PROBLEM: AN APPROACH TO THE INTEGRATION OF BASIC SCIENCES AND CLINICAL SCIENCES IN MEDICAL EDUCATION

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The objective of laboratory practical work in basic medical sciences departments are for most to increase the students understanding of theoretical information they gain during the lecture, besides to train their skills and affective capability. Students in most modern schools, especially in the basic science courses, are required to memorize a large number of "facts". The sets of facts may or may not be relevant to medical practice. As medical students enter the clinical years it is often documented the student's poor retention of basic medical science information. It is often difficult for them to master the skills of implementing basic medical science information in creating a differential diagnosis and appropriately using diagnostic tests. Bridging the basic science years with the clinical years using practical laboratory work based on clinical case besides will enhance these skills can also improve the retention of basic medical science information.

For that purpose we developed a model to improve basic medical sciences understanding and its integration to clinical aspects. In this model we presented clinical cases as a focus of learning. Three clinical cases, i.e., patient with acute myocard infarction as complication of NIDDM, osteoporosis patient with lumbar compression fracture, and beta thalassemia patient, were used to study and implement the biochemistry of metabolism, signal transduction, and genetic information.

Students were devided into groups of 15 members supervised by a tutor. The activities were started by defining issues from the cases, followed by gathering information from the lectures and other sources, conducting laboratory assessments of some laboratory values from the patients (standardized sample) related to the topics in the lectures, and discussion which combine the results of laboratory assessment and theory they gain from the lecture as well as from other sources. Evaluation were conducted through student oral case analysis whereby the students have to analyse cases they get using theories they learned during the program. Questions raised by the examiners only to clarify the analysis.

This program has not only markedly increased students achievement in the theoretical examination, but improve their capability in discussion, information gathering as well, and also academic atmosphere among the faculty member.

THOUGHTS ON THE STATE AND PROSPECT OF ESTABLISHMENT OF KEY COURSES OF CLINICAL COURSES

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Curriculum is an important part on which teaching plans are designed for higher education, and the focus of the design of teaching plans is to build up rational structures of disciplines and reasonable proportions between key courses and general courses. Based on an investigation on the status of the curricula in some clinical medical colleges and an analysis of the arrangement of key courses in those colleges, this article discusses the problems associated with the design of key courses identified in the curricula and some suggestions for the reform are correspondingly made.

THE USE OF FOCUS GROUP INTERVIEWS IN ASIAN MEDICAL EDUCATION EVALUATIVE RESEARCH

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Objective

To evaluate the use of focus group interviews in Asian medical education evaluative research.

Methods

Randomly selected medical students were invited to participate in 30 focus group interviews to provide in-depth data on the effect of introducing early clinical skills on their learning. Efforts were made to meet all the students to help them understand the objectives of the focus group. Confidentiality was emphasised and a non-faculty interviewer was recruited for the interviews.

Results

The students considered the use of focus groups to be a more meaningful way of collecting students' opinion than other methods, for example structured questionnaire, because it allowed an interactive discussion. They also felt that having an independent non-faculty interview moderator had encouraged them to express their opinions more candidly during the interviews.

Conclusion

The use of focus group interviews among Asian medical students for evaluative research is practical and efficient.

(Based on a paper published in Medical Education of the same title 2001;35:510-513)

THE UTILITY OF A SIMPLE POST (OSCE) ASSESSMENT FEEDBACK QUESTIONAIRE IN A CLINICAL SKILLS UNIT

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The International Medical University (IMU) is a young and innovative, privately owned medical school that runs an integrated medical curriculum. An important feature of the curriculum is that students have clinical exposure in the early years of their training. The Clinical Skills Unit (CSU) is one of our major facilities for promoting basic and clinical science integration. Beginning from the second semester, our students are exposed to the clinical science/art of history taking and physical examination - an essential feature of the phase I (pre-clinical) curriculum. The objective structured clinical examination (OSCE) is a popular tool for the assessment of clinical knowledge, attitude, and skill. One of the main responsibilities of the CSU in IMU is to organise OSCE examinations for our phase I students. The adequacy of the time allocated to the OSCE stations and the difficulty level of the questions continue to be debated.

In a recent OSCE examination for 5th semester students (preparatory to advancing to the clinical years), a simple questionnaire was designed to obtain feedback from the examiners on the adequacy of the time (5 min) assigned to each of the OSCE stations. One hundred and twenty students sat the examination. There were 8 physical examination questions requiring three examiners per question and each assessed a total of 40 students on only one question. The three examiners for each question held pre-examination meeting to standardize examination format and approve the assessment criteria. Each examiner was served a simple questionnaire which was aimed primarily at determining the adequacy of the time allocated for the questions. The first part of the questionnaire was to identify the OSCE station, the second and third parts were to determine how many examiners could go through all the questions and whether they had to rush the students to achieve that. The fourth part was on general comments. On collation and analysis of the feedback it became clear that this simple questionnaire could serve a very useful pedagogic purpose, beyond determining the adequacy of time allotted each question. This is especially so when the data was analysed in combination with the examination scores. We gained some insight into our OSCE process, question quality, particularly its discriminatory and difficulty index. The exercise helped in identifying some questions that could be used as standard reference for reviewing future OSCE questions. This paper will highlight some of the pedagogic values derivable from such a simple questionnaire.

NEEDS ASSESSMENT FOR STAFF DEVELOPMENT IN THE COLOMBO MEDICAL FACULTY

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Introduction

The introduction of a new curriculum in the Colombo Medical Faculty with increasing responsibility given to staff for curriculum development and to use teaching/learning methods hitherto not used has made it necessary to develop competencies in education.

Objective

To assess the needs for staff development among academic staff members.

Methods

Descriptive cross sectional survey was carried out among 62 academic staff members using a self-administered questionnaire. Open-ended questions provided explanations for responses given by lecturers. Senior Professors were excluded.

Study setting

Faculty of Medicine, University of Colombo

Results

The response rate was 67.7%. Mean years of service were 9.17 years (±SD 8.36). Staff developments programmes had been attended by 38 (90.5%) of staff members where 36 (85.7%) expressed satisfaction with the programme. Reasons for dissatisfaction (4.8%) were irrelevant content, poor time management during the course and difficulty in practical implementation of the methods learnt. Further training on teaching - learning methods were felt to be necessary by 34 (81%) and 25 (59.5%) were interested in assessment methods. The preferred time to have training programmes was the vacation 23 (54.8%). The perceived key role of an academic in the university was identified as being a teacher by 36 (85.7%)

Conclusion

The majority of the staff members have attended staff development programmes. There is need for training, specifically in areas of teaching - learning methods, curriculum evaluation and assessment methods. Organizers have to pay attention to timing and make programme more relevant. Among the roles of a medical teacher of researcher, service provider and teacher, it was noteworthy that the teaching role was given priority.

A TRANSITIONAL COURSE FROM HIGH SCHOOL TO MEDICAL SCHOOL IN A NEW MEDICAL CURRICULUM IN ASIA: HOW EFFECTIVE IS IT?

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Objective

To examine the effects of a transitional course for Asian freshmen in a revised medical curriculum.

Methods

Data were collected through the year-end questionnaire distributed to all First Year students over three academic years from 1997 - 2000.

Results

The students considered the transitional course had encouraged them to be active, self-directed learners although there were different views about its overall effectiveness. Some suggested additional support to those students who did not have a biology background from high school. Students appeared uncertain as to the depth in which they were expected to master the subjects, thus leading them to call for more clearly stated learning objectives to help relieve the anxiety they had towards the examinations. Lectures and self-assessment exercises were seen to be providing the general guides for that. Clinical components were generally well accepted.

Conclusion

The transitional course helped the Asian freshmen to adapt their passive learning style to the requirements of a self-directed problem-based new medical curriculum.

STRESS PERCEPTION IN FIRST YEAR MEDICAL STUDENTS ATTENDING AN URBAN MEDICAL SCHOOL IN MALAYSIA

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Introduction

Lack of stress coping strategies in medical students and practising professionals, may manifest ultimately in substance abuse and, in extreme cases, even in suicidal thoughts (Vaz, et al, 1998). In rapidly industrialising Malaysia with its increasing demand for healthcare, few attempts have been made to determine the stressors experienced by preclinical medical students in order to promptly identify any vulnerable group.

Aim

The objective of the study was to determine the incidence of stress amongst first year medical students in an urban medical school and to identify perceived sources of stress amongst this group.

Methods

A questionnaire-based survey was conducted on 181 first year medical students attending the University of Malaya, Kuala Lumpur. Student responses to various perceived intrinsic, extrinsic and anticipated stresses were assessed as well as various coping strategies.

Results

The multi-ethnic distribution of the sample (response rate 75.4%) was representative of the country's population at large. The majority of local medical students (57.5%) reported experiencing more than moderate levels of stress, although to varying degrees and with a female predominance (67.1%). Aspects of the medical school curriculum, particularly in relation to assessments and examinations (77%) and need for independent study (70.2%), contributed most highly to their anxiety. Interestingly, academic staff, coursemates and faculty facilities did not feature as major stressors. Although these medical students were derived from varied socio-demographic backgrounds, intrinsic stressors related to personal relationships, life events, personal finances and urban cultural environment were not considered particularly stressful. Surprisingly, anticipated stressors related to patient illness/death during clinical years/post-graduation similarly did not feature too significantly. For stress relief, the majority of students (95.0%) reported taking positive measures to alleviate anxiety including sleeping, eating, taking refuge in religion and confiding in friends/family. Only half the students sited carrying out exercise/extra-curricular activities as a relief mechanism. Notably, a small minority in this survey (less than 3.5%) admitted to resorting to substance abuse to cope with stress.

Conclusion

This study has demonstrated that a majority of first year medical students at University of Malaya perceive themselves to be experiencing varying degrees of mental stress, of which key stressors include current preclinical issues of examination and curriculum-related matters. Thus, it is pertinent to recognise that such stresses exist early in Malaysian medical students and prompt identification of vulnerable groups is vital in order to introduce stress-management education including positive coping strategies, support systems and counselling.

THE IMPORTANCE OF BRIDGING COURSES IN ASIA – THE BAQAI EXPERIENCE

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Universal education has failed worldwide but the effects in the developing world are catastrophic. This is particularly noticeable in medical schools with the increasing complexity of mushrooming information. The coping mechanism is specialisation which leads towards note learning and examination orientation.

Students merely continue their successful school note learning process and do not make a successful transition to the deep learning required at university. Educational theory and practice, furthermore, cannot cope with this transition as they do not incorporate recent advances in the understanding of brain physiology. The outcome is that medical students do not develop lifetime learning skills and relying on lectures and outdated textbooks, are ill equipped to undertake the student involvement required for such methodologies as problem-based learning.

The Baqai Medical University has designed a bridging course to deal with these problems. The structure is concerned with the physiology of learning, the hierarchy of medical knowledge and the practical application of these factors to successful transition to university, which teaches them how to think, a far broader requirement than a technical college which merely informs them. The Baqai course is presented together with correlation's with outcome in the first year. It is proposed to repeat a modified course on entry to the clinical years.

SHARING WEB-BASED LEARNING MATERIALS

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This paper aims to create an awareness and stimulate discussion on the need for collaboration among medical teachers of the Asian medical schools in the development of common and shared web-based medical undergraduate learning materials.

Medical schools are increasingly using the web for teaching and students are similarly accessing web sites to facilitate the attainment of their learning objectives. The web has been found to provide increase accessibility of students to learning material, facilitate learning at an individually determined pace. It provides a good platform for increasing and enriching student-teacher and student-student interaction over learning issues and is ideal for stimulating self-directed learning and creative thinking. From the teacher's perspective, the web enables a customised and hence varied approach to the attainment of learning objectives. In addition, the teacher's expertise is made available to all students whenever needed. Finally, the Web is a useful platform for mounting Problem-based learning.

The development of a good learning web site however needs much expert and multidisciplinary input and investment in time and resources. Most medical faculties will in all probability posses only limited resources to set aside for the development of web-based learning. A survey that we recently conducted revealed that the majority of undergraduate teaching sites did not meet all the recommended criteria of adequacy. In particular, we observed that the teaching sites did not encourage critical thinking or evidence- based learning. If the situation is not changed, it will take many years for a significant portion of the teaching and learning activities to become web-based.

International and inter-institutional collaboration in the development of shared web sites will greatly reduce the burden on each department and hasten the development of web-based learning. The shared web sites will mean pooling of intellectual resources. Shared web sites need not in any way reduce the superior learning opportunities that one institution could provide when compared to another. The sites can through the presence of hyperlinks enable additional learning objectives unique to each school to be attained. Password mediated and restricted entry to the sites will ensure that only the staff and students of participating institutions benefit from the arrangement.

The time is ripe for the development of a pilot shared web site for medical undergraduates.

THE INTER-MED.ORG VIRTUAL MEDICAL UNIVERSITY PROJECT

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International Medical University, Malaysia

As the amount of medical knowledge grows, it is impossible for any individual to retain or to keep up to date with its entirety. This has impacted on the way in which doctors are trained so that the emphasis in medical education has changed from the delivery of factual knowledge to the development of learning abilities as exemplified in problem-based learning. Coupled with the rapid change in the mode of teaching by the use of computer-driven techniques, the need for medical training to be delivered in a physical centre has diminished. The application of web-based technology has led to the possibility of delivery of medical education on-line at an affordable cost to a global market especially to regions where there is a demand for doctors to be trained to an international standard.

The International Medical University (IMU) has a partnership with 22 medical schools throughout the world and is in a unique position to establish a consortium for the delivery of such a programme. The Inter-med.org Virtual Medical University (VMU) web-site has already been developed as an interactive programme to access courses offered both by the IMU as well as the partner schools. It is envisaged that this will allow a student to choose the source of the course to be taken, the sequence of the courses and the time frame. Thus the student will be able to determine the topics and the pace of their programme. In addition to course material being available through the Internet, on-line tutorials and problem-based learning sessions will be offered. The development of a VMU e-library consisting of copyrighted digital materials as well as e-Med pathways will complement the teaching programmes.

Initially the VMU will concentrate on the delivery of integrated courses in the basic medical sciences coupled with relevant clinical applications. However with the development of virtual reality technology, simulated clinical material may become available. The students would apply their clinical knowledge in attachments to clinics in the area where they reside. The emphasis would be on primary healthcare rather than secondary or tertiary level facilities.

A pilot project will be presented to demonstrate the potential of the VMU. As the concept is developed further, a number of issues will need to be addressed such as governance, copyright, availability, assessment and accreditation.

THE INTEGRATION OF WEB-BASED LEARNING IN THE MEDICAL CURRICULUM AT THE INTERNATIONAL MEDICAL UNIVERSITY

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As part of the International Medical University's objectives to integrate the use of information technology in the delivery of the medical and clinical curriculum, OLIS (Online Learning Interactive System) was conceptualized in December 1998 and piloted in March 1999 with one batch of medical students.

Today, OLIS has been implemented for the past five semesters and used by eight batches of students. OLIS comprises more than 6,000 pages of content (Study Guides and Fixed Learning Modules) with about 10,000 images.

OLIS also provides self-assessment questions, supports internal messaging between and among lecturers and students and enables active online discussion among students and between lecturers and students. OLIS was designed to supplement existing curriculum delivery mechanisms and has been greatly welcomed by the more IT-oriented students and lecturers. The paper will highlight how OLIS was developed and the challenges it faces until today.

INTRODUCTION OF NEW SIMULATOR AND NEW TOOL TO TEACH CLINICAL SKILLS AND OSCE

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Objective

To evaluate the usefulness of clinical skills laboratory with new simulator and new tools to teach basic clinical skills for medical students.

Method

Clinical skills laboratory with videos, X-ray films, manikins and other tools was introduced to medical students to improve their basic clinical skills.

Results and Discussion

Clinical skills laboratory was useful to 61% of medical students. Among manikins, the new cardiology patient simulator "Ichiro" was most appreciated to learn cardiac sounds and murmurs. We still need to develop clinical skills laboratory in size and in quality.

A USEFUL METHOD OF TEACHING TRADITIONAL CHINESE MEDICINE

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In the 90s, internet became a useful tool for message exchange. It is used in more and more fields of science. As a modern method of communication, it was brought into the field of education. We, at the Department of Traditional Chinese Medicine, attempt to do a reform in education. We make a good impact on class 97 and 98 of the Bachelor of Medicine.

We have introduced to the students of class 99 the traditional Chinese medicine net to assist their learning. The students have welcomed the change and the effect was evident. In practice, we find that the reform is helpful for students to improve their creativity and their practical skills. It also helps solving the problems of inefficiency in learing limited information, spoon-fed teaching style and a bowling atmosphere. What is more, the contents of the net include the following: "the on-line classroom" which emphasizes on overcoming the difficulty arising from limited courses and increasing amount of contents to handle. We guide the students to collect all the pictures of tongue appearance in the text of TCM diagnosis and pulse graph. Another part is "The viewing of famous doctors" which introduces the TCM experts of Guangzhou Medical College and portraits students' learning in TCM field.

Poster Presentations

TRAINING THE PHARMACOLOGY TEACHER: ISSUES TO PONDER

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Significant changes in medical education philosophy have occurred in the last 20 years. This phenomenon has been driven largely by the factors of time and the chip revolution which together have propelled an explosion in the body of medical knowledge and its dissemination. These development have created new challenges to the medical doctor, student, and teacher. These include the need to grapple with an ever-increasing body of knowledge and the concomitant shifts in medical paradigms. There is also the challenge of being community-oriented enough to relate adequately to an increasingly enlightened public. These challenges constitute a major driving force in the increasing adoption of such new approaches in medical education as the PBL and the integrated curriculum. How does Pharmacology fit into this scenario? How do we train the Pharmacology teacher to enhance his utility value and relevance in the new order? We have reviewed aspects of these questions.[1] This paper shall discuss the challenges that face the modern Pharmacology teacher and, thus, suggest the type of training this teacher should have. We shall also take a look at the present mode of training to determine its strengths and weaknesses vis-à-vis the modern demands. We shall attempt to point to the future.

Reference:

(1) Achike F.I., Ogle C.W. Information overload in the teaching of Pharmacology. J. Clin Pharmacol. 2000; 40: 177-183.

DEVELOPING BENCHMARKING TEST FOR UNDERGRADUATE IN MEDICINE: CLOSSING THE GAP OF MEDICAL EDUCATION IN THE FOURTH WORLD TOWARD GLOBALIZATION

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Medical education in the changing world improved tremendously in line with the rapid changes in medical science and technology, and the transition of epidemiology, which in turn influence health services in the 21st century. This situation pushed health problem in the existing third world become health problem of the fourth world, which is the combination of the advancement of science and technology of the first world and the remaining health problem of the third world (3+1 = 4).

To anticipate this situation, efforts and innovations are considered by many medical education institutions which cannot be standardized precisely to secure its quality control. The introduction of social accountability is the expression of demand on quality control of standard health service, which can secure the management of medical school to maintain the relevance, quality, effectiveness and equity of their education process.

For this purpose we developed Benchmarking Test for Undergraduate Medical Education as a tool to assess and evaluate the output of educational process. The test is a written, multiple-choice, and comprehensive examination to determine whether an examinee understands and can apply important concepts of the basic biomedical sciences, with a special emphasis on principles and mechanisms underlying health, disease, and modes of therapy.

Eight medical school in Indonesia representing prominant public and private medical school throughout the country were involved in this process. 150 questions for the first package of the test were selected from 1200 questions proposed from those 8 institutions representing each 31 departments. Questions are grouped into humaniora sciences, basic medical sciences, paraclinical sciences and clinical sciences, with 70 % are departmental questions while 30 % are integrated, and the level of competency are 60 % and 40 % for easy to moderate and moderate to difficult respectively.

The result of the first benchmarking test participated by 480 undergraduate students showed mean value of 78.3 with 15.1 of SD (min : 32 and max : 122).

This benchmarking test is proposed to be developed further in the future as National Board Examination in Medical Education, as a standardized tool to close the gap in medical education anticipating the globalization .

IDEAL ATTRIBUTES OF A MEDICAL TEACHING WEB SITE. DO WE HAVE THEM?

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Aims:

1. To sample survey the existing medical teaching web sites for undergraduate medical students and residents to determine if the potential of the web technology is harnessed and
2. To determine if the modern teaching paradigm is reflected in these sites.

Introduction: the explosive growth of the Internet in the last decade has given rise to mushrooming of informational web pages everyday, which has prompted several experts to publish checklists to evaluate the quality of the informational web pages. However, no specific guidelines are yet available for medical teaching web sites. In recent years, the paradigm in education is shifting from one of Teaching to that of Learning. The center of knowledge acquisition has shifted from teachers to that of students. The modern teaching philosophy exhorts to incorporate or encourage Active Learning, Critical Thinking, Independent and Evidence Based Learning on the part of the students. Our aim was therefore to determine if the existing medical teaching web sites have incorporated the principles of learning.

Methods: We have researched some of the existing medical teaching web sites of the renowned medical colleges in USA and Europe (n=18) to which the access was uncontrolled. We have assessed the following:

1) **the general quality** of the informational web sites based on the checklist proposed by Janet E. Alexander and M.A. Tate which consists of Authority, Accuracy, Objectivity, Currency, Coverage and Feedback
2) evidence of attributes of **modern teaching** philosophy consisting of Active Learning, Critical Thinking, Independent and Evidence Based Learning & feedback and
3) **format and flexibility**.

The limitations of our study were that, only freely accessible medical teaching web sites were evaluated. As the study sample was small, we have calculated confidence intervals (95%) using Perl Programs from Arizona State University College of Education's online statistical program.

Results: In less than 10%, it was not clear if the courses placed on the web were wholesome or supplementary to the classroom teaching. Only 17% (C.I 95% -02-0.35) of the web sites fulfilled all of the general qualities of an informational web site. The coverage of a given topic, which was though subjective, was overall good. It was surprising that only 39% (95% C.I. 0.17- 0.64) of the web sites described the objectives clearly. Promotion of critical thinking and evidence-based learning was obvious in 50%&39% of the cases (C.I 95% 0.26-0.73& 0.17-0.64) respectively. Flexibility in presentation of the topic to enhance learning was evident in 61% (C.I 95% 0.35-0.82).

Conclusions: It was noted that less than one fifth of the web sites have satisfied all the criteria for learning principles and general qualities of an informational web site respectively. It was clear that in practice, the technological revolution was ahead of the shifting educational paradigm. We, therefore suggest that an ideal stand alone medical teaching website should not only meet the general requisites of an informational web site but also incorporate the principles of new educational philosophy with appropriate use of the multimedia. It may be necessary to reevaluate the existing websites to reflect the above features.

MEDICAL EDUCATION AND THE BAQAI MODEL

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The Baqai Medical University, the first university based on community oriented medical education was founded in 1986. It has evoked into the unique Baqai Model which is 10 years in advance of any other system for dealing with the problems of a deprived rural population.

The unique combination of features that contributes to the success of the Baqai model are described. In particular health education and self help social upliftment are not separated as they are intimately interdependent.

The most important of these is education which is central to short and long term social improvement. The important aspect of the Baqai model educational process is:

(i) Flexibility. Health care workers and not necessarily doctors are needed, particularly in rural areas, hence B.Sc. Nursing is a major priority.

(ii) Social obstetrics with its emphasis on women's education.

(iii) In addition to adult education and health information, education is dealt with at 3 levels:

  (a) Primary education. This is critical for later tertiary education as children must be taught how to think rather than only how to remember. The process and options are described.

  (b) Bridging course on entrance to university. Deep learning is essential if advanced teaching methods such as P.B.L. are to be used. A separate presentation will be made.

  (c) A post graduate certification course for degrees is planned. This includes history, philosophy, logic, statistics and computer literacy. The object is to produce an educated post-graduate rather than a technically competent doctor.

All of these are considered essential if Asian Medical Education is to prosper and avoid becoming an intellectual underclass.

STUDENTS' VIEWS ON MEDICAL EDUCATION: PRELIMINARY FINDINGS OF THE FOCUS GROUP STUDY

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Objectives:

The purpose of this study was to investigate students' views and experiences of the old medical curriculum which was mainly a didactic-based format of teaching in the medical school, the University of Hong Kong.

Methods:

Qualitative research methods were used to explore students' experiences of a university education in medicine. Focus group interviews were employed to examine the perspectives on students' expectations, their role and responsibilities, the medical curriculum, and role of teachers. We interviewed seventeen groups of 4th (ten groups) and final year (seven groups) medical students between December, 1999 and June, 2000. The number of participants in each group was between 2 and 9. Forty-three participants were male and twenty participants were female.

Results:

A major finding of the study, determined through a content analysis of these interviews, concerned the versatility of the education. Many students expressed the idea that the university education should be well rounded. However, the medical training experience limited their chances to expose themselves in a wider community. Concerning their role in their education, many students found that they still played a passive role in learning experiences. However, there was more of a student driven mode of learning in the clinical years of study. The students reported there was little to be enjoyed in the course of studies because of the pressure from the examination-oriented culture of their medical education. Concerning the medical curriculum itself, many found that it was too much for them to learn at this specific point. This was especially true while they were in the pre-clinical years of study. Moreover, the students reported a lack of continuity among subjects. The full curriculum, which emphasized knowledge and skills, triggered many recognised that they had little time to absorb the new information, and felt a lack of any unique inspiration throughout the training. Overall, most students recognised that patient contact in clinical years motivated them to learn. However, some students experienced very demanding clinical tutors. They highlighted that they needed teachers who were supportive, encouraging and responsive to them.

Conclusion:

The students' reported experience revealed that there were areas that required attention in the old medical curriculum. The medical curriculum reform in the Medical Faculty since 1997 has been intended to minimise those "shortcomings" experienced by these students and facilitate better teaching and learning experiences. The ultimate aim is to educate and train well-rounded medical practitioners to meet the changing needs of patients and society at large.

CORRELATION OF EXAMINATION PERFORMANCE IN PHYSIOLOGY WITH STUDENTS'S APPROACH TO LEARNING

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Students are known to use different approaches to their learning and their approach has a great impact on quality and quantity of their learning, acquisition of knowledge and academic performances. Students who consistently adopt a deep approach were reported to be more successful in examinations than those who consistently adopt a surface approach. Very little information is available regarding the association between the approach to learning and performances in examinations in Physiology in medical schools from Asian countries. The medical school at Ragama follows the traditional subject based curriculum and admits students directly from high school on the basis of a national school leaving examination. Education in the schools is heavily teacher centred with emphasis on rote learning.

Method: A prospective study was carried out on a cohort of one hundred and sixty two students enrolled in the Second Year of undergraduate medical course at the Faculty of Medicine, University of Kelaniya. The Adelaide Diagnostic Learning Inventory for Medical Students (ADLIMS) was administered to this cohort of students during the fourth term of their basic science course. The responses to individual questions were pooled to highlight three factors 1,2 and 3. Factor 1 reflecting disorganised study habits, factor 2 examination distress and inability to grasp the relationship between concepts and ideas; factor 3 assessed approaches to learn problem solving abilities. The marks in written continuous assessments (CA), final oral examination and practical examination (OSPE) were used for the correlation studies.

Results: One hundred and thirty four questionnaires of a total of 162 were returned. Of these 116 (72% of total) were available for analysis. Fifty eight (68% of total) were males and 58 (76% of total) were females. There was a significant negative correlation between the scores for Factor 1 representing disorganised study and marks for Physiology written continuous assessments ($r^2 = -0.2169$, $p < 0.05$). The scores for Factor 2 which tapped examination distress and inability to grasp relationship between concepts and ideas showed a strong negative correlation with marks for continuous assessments ($r^2 = -0.5200$, $p < 0.001$), oral ($r^2 = -0.2794$, $p < 0.01$), total practical marks ($r^2 = -0.2649$, $p < 0.05$) and non skill parts of OSPE ($r^2 = -0.2014$, $p < 0.05$) but not with skill component of OSPE ($r^2 = -0.1458$, $p > 0.05$). The correlations with Factor 3, which assessed problem solving, were not significant.

Conclusion: The written assessments currently in use are true/false MCQs which are mainly recall type plus short answer questions and the non-skill components of OSPE in Physiology should be modified to test more of the problem solving abilities.

HOW DO PEOPLE MAKE JUDGEMENTS ABOUT THE INTELLIGENCE OF OTHERS? SOCIAL PSYCHOLOGICAL RESEARCH IMPLICATIONS FOR PBL ASSESSMENT

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Evaluation of students in Problem Based Learning (PBL) groups accounts for a significant proportion of final marks for students in the HKU Faculty of Medicine's New Medical Curriculum (NMC). However, it is sometimes considered that such measures are less objective than knowledge-based paper and pencil tests. As PBL assessment is performed on the basis of observations of others' behaviours, it is important to know to what extent such behaviours correlate with more objective measures of intelligence. This paper considers factors that determine how we perceive and make judgements about other people's performance. It will review some recent research on interpersonal judgements of intelligence and performance and relate them to the problem of PBL assessment. Factors such as the frequency and type of speech acts, the range of vocabulary used, comprehensibility, attractiveness, gender, body build, appearance and visibility of speakers within a group can all affect abservers' judgements of participants' level of intelligence or performance. Some of these factors correlate quite highly with objective measures of intelligence, but others do not. Moreover, not all of these factors exert a positive influence on judgement and can subtly bias perceptions of students' performance within a group setting, such as a PBL group. For example, cross-gender bias results in females' performance being rated more extremely in both directions than comparable performance by males. The paper will consider the implications of social-psychological research for PBL assessment in the NMC.

THE SETTING UP OF POSTGRADUATE DIPLOMA IN COMMUNITY GERIATRICS AT THE UNIVERSITY OF HONG KONG

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The Family Medicine Unit of the Faculty of Medicine, University of Hong Kong, in collaboration with the Hong Kong Geriatrics Society launched a Postgraduate Diploma in Community Geriatrics for primary care physicians in 2000. This was in response to the rapidly rising elderly population in Hong Kong and the fact that most of the primary care doctors practising today have little or no formal undergraduate training in the health care issues that are relevant to older people. The objectives of the Course are to improve the knowledge, skills and confidence of primary care physicians in the care of the elderly. It also emphasises the aspects of care that are different for the elderly. The Course lasts for one year and is delivered by distance learning, problem-orientated seminars and small group clinical teaching. Learning centres are established in different regional hospitals in Hong Kong in order allow small group clinical teaching while, at the same time, reduce travelling time for the students. Information technology is also used to facilitate teaching and learning, as well as to encourage communication among teachers and students. The Course was oversubscribed for both intakes in 2000 and 2001. The presentation will highlight the experiences gained from setting up the Course and its first year of running. It will also discuss the observations made on the students' learning activities.

NEW CURRICULUM AT KYUNGPOOK NATIONAL UNIVERSITY SCHOOL OF MEDICINE

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Kyungpook National University School of Medicine (KNUSM) is a governmental school with approximately 520 medical students and over 150 full time faculty members.

The curriculum reform was undertaken at KNUSM to meet new educational objectives in order to cope with a rapid societal changes anticipated occurring in 21st century and to correct curricular weaknesses cited by the Korean Medical School Accreditation Committee in 1996. The KNUSM Curriculum Development Committee was charged to formulate a new curriculum, which consisted of enhancement of patient-centered care based clerkship, integrated courses based on organ systems, problem-based learning, and additional teaching on social medicine, medical informatics and biomedical engineering. The philosophy of this curricular reform has been to modify methods of teaching medical students toward self-directed learning and student-centered. This whole concept was a drastic departure from the traditional lecturing, in addition, some minor subjects were assigned as elective courses instead of maintaining entire curriculum as essential course-based teaching.

In the new curriculum total of 180 credit courses, 4395 hours to graduate medical school were reduced to 170 credit courses, 4250 hours. As a part of the social medicine course, a 2 credit-hour course on patient-doctor relationship was taught in freshman and sophomore. Two credit-hour PBL tutorials were added to freshman, sophomore and junior years. In order to carry out this education reform, three new departments were inaugurated such as Biomedical Engineering, Medical Informatics and Medical Education. The school facility has also been improved during this preparatory period including establishment of Self Learning Center equipped with over 110 PCs connected with medline search and other on-line education capabilities, 2 brand new multimedia –lecture halls and 11 small break-out rooms for small group discussions.

The new curriculum has been implemented in 1999 academic year and annual faculty workshops have been held to monitor the progress of the reform and improve courses by evaluating impact of the change on both faculty members and students as well.

The interim evaluation revealed several issues remained to be resolved. During this period of change over, students who have taken leave of absence required taking repeat courses for which they had successfully completed previous academic years due to integration of courses in the curriculum. Assessing students'

performance on small group discussions and PBL created some strain with inter tutor variability; this problem will require some time to be resolved. Real integration of contents of lectures in the integrated courses will further have to be harmonized. The students need to learn how to select elective courses for their best benefit and adjust self directed learning style. The reform required increased number of faculty members and continuous faculty development efforts.

In conclusion, the education reform has successfully been implemented at our medical school after approximately 4 years of preparatory period. The acceptance of this reform was excellent from both faculty members and students although there have been continuous problem solving and adjustments necessary. The real assessment of the outcome of the reform requires many years to come and there has to be continuous monitoring of the progress and adjustment of curriculum are the pivotal of a success of the sort of education reform.

EXPERIMENT ON "QUESTION-CENTERED" MODE OF CLINICAL PRACTICE OF SURGERY

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Objective:

To improve medical students' comprehensive ability and making effectively and carry out reform of medical education during clinical practice of surgery; to abandon the old teaching mode of students "listen to what teachers said" and "imitate what teachers did" and the teaching method of tearing various systematic diseases asunder; to adopt the "question-centered" mode of relating various systematic diseases, that is, teachers enlighten students through advancing questions, and students answer the questions and operate according to the questions and practical cases. Hence to find out a new mode of flexible, profound, active and interest-based teaching and learning.

Method:

A fixed group of teachers carried out the experiment on a group of interns selected from 5-year medical students, and the teaching materials were on several frequent diseases of major surgery. The teachers gave lessons, cases discussions and lectures on special subjects which focused on advancing questions and the students studied medical theories and cases through discussions, seminars and speech presentations, etc. The effect was evaluated with the following parameters: interest of learning, memory depth, etc.

Results:

All of 24 students who were investigated affirmed that the new mode was helpful to enhance the depth and breadth of medical thinking of individuals and was useful to inspire knowledge-seeking; What is more, it is in favor of memory of correlative knowledge. However, the new mode may also in some extent bring psychological stress on the students.

Conclusion:

Clinical practice of surgery directed by the "question-centered" mode of teaching can elicit the students' lateral thinking and force them to study actively. Therefore, it is able to improve the students' ability of independent thinking and solving practical problems with medical theories. In addition, it is able to make clinical practice of surgery more attractive to medical students.

GUANGDONG MEDICAL COLLEGE: GREAT PROGRESS IN DEVELOPMENT AND REFORM

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Besides Sun Yat-sen University of Medical Sciences there are other five medical colleges in Guangdong Province (with a population of 82 million) among which Guangdong Medical College is the largest in scale with the greatest number of students.

Since the founding of Guangdong Medical College 43 years ago, outstanding achievements have been made with great progress and development. During the past 10 years, Guangdong Medical College has been greatly changed: building space from 50,000m^2 in 1991 to 150,000m^2 in 2000, the number of disciplines accredited to confer master degree from 7 to 14, the number of undergraduate specialities from 2 to 8, the total value of equipments for teaching and research from 3 million Yuan to 40 million Yuan.

Guangdong Medical College mainly trains doctors for big and medium-sized cities and some towns in our Province. Up to now we have already turned out 12,000 doctors and 3,000 nurses who are now the backbone in the medical field throughout the province with some working in all parts of the country, and even abroad.

All the faculty are demanded to put quality and ability in the first place. A large number of high-quality teachers especially young medical doctors and masters, have been recruited from all over the country. So both teaching and scientific research are constantly blazing new trails. Since 1978 more than 200 prizes in teaching and scientific research achievements at national, provincial or municipal levels have been awarded.

There are five affilliated hospitals. The first one of which is a class-3-grade-A hospital with 1,200 beds and a medical staff of 1582 nearly 200 of whom hold high professional posts, such as professors, associate professors, chief doctors and so on. It belongs to the "National hundred best hospitals". Its various facilities amounting to 4200 sets (or pieces) with a total value of more than 100 million Yuan are mostly advanced and up to date, among which are MRJ, CT, ECT, etc. The number of out-patients top to more than 700,000 and in-patients nearly 20,000 a year.

Authorities of the college attach great importance to quality in teaching and research and to abilities in practices. Raising the quality in teaching and hightening the level of scientific research are our starting points. We will pay a great attention to teach the students in molecular biology, computer and foreign languages in order to meet the need for medical students of the 21st century, also want to give our students more opportunities for hands on learning and practice advancement of medical science.

It's an honour for us to have the chance to cooperate with medical universities and colleges in Asia. We are only too glad to do our share in order to raise our level of medical treatment and better our health service for the local people.

PBL AT IMU (PROBLEM-BASED LEARNING AT THE INTERNATIONAL MEDICAL UNIVERSITY)

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The International Medical University (IMU) first started in 1993 as the International Medical College (IMC), attaining full university status in 1997. The education programme for the IMU was planned and implemented jointly by the IMC in collaboration with several Western universities, with the students spending the first two-and-a-half years in Malaysia and the later years in one of the partner medical schools (PMS). At present, the students can opt to complete their medical degree at the IMU.

The IMU curriculum emphasises the integration of basic medical sciences with clinical medicine and focuses on the acquisition of clinical skills and attitudes that produce a community-orientated doctor. Since its inception, the IMU has adopted student-centred learning as an important institutional philosophy. Hence, it has applied newer curriculum delivery methods to induce active learning among the students, the major one being Problem-Based Learning (PBL).

The IMU, being a new institution, was able to implement the innovative curriculum without having to go through any transitional state converting from a traditional curriculum to the newer approach as in the case of many institutions in this region and elsewhere. When the IMU started, PBL was not used generally in most medical schools. Hence, it was difficult to recruit academic staff who understand the philosophy of PBL or have any experience with facilitating a PBL session. Nevertheless, the first cohort of IMU students sent to the PMS have successfully completed their medical degrees, many with honours. IMU has managed to sustain similar achievement with the next 2-3 cohorts of students that had transferred to the PMS. Currently, with more faculty development courses/workshops, we have managed to train most of our faculty in the art of PBL facilitating. We have also started a week-long PBL induction programme to introduce students to PBL upon their entry into IMU. This exercise has helped the students to establish a clearer perception of the PBL philosophy and methodology. Although the IMU-PBL has been successful, we are still trying to fine-tune our PBL method.

FACTORS MOTIVATING MALAYSIAN STUDENTS IN THE CHOICE OF MEDICINE AS A CAREER

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Introduction: Choosing to study medicine in any part of the world is a complex decision influenced by a multitude of extrinsic and intrinsic factors. In the new millenium, as Malaysia faces aggressive industrialisation with concurrent expansion of the healthcare sector, there is an urgent need to determine motivational factors influencing medicine as a career choice. Identification of these influences is important in determining if medical students of the future are secure in their career choice to face both the knowledge explosion in medical education as well as the challenges of changing healthcare trends. **Aims of study:** To determine (1) factors influencing choice of medicine amongst Malaysian students attending an urban-based medical school (2) the current level of satisfaction of these students in their choice of career. **Method:** A questionnaire-based survey was conducted on 142 first year medical students at University of Malaya, Kuala Lumpur. The motivational factors studied included socio-demographic factors, personal influences and also perceived benefits of future lifestyle as a doctor. Items were scored according to positive or negative responses and option was also provided to state motivational influences other than those mentioned in the questionnaire. **Results:** An encouraging response rate to the survey (84.5%) was obtained from the medical students who had completed 6 months of their course. The sample, majority of whom were females (65.8%), ranged between 19-22 years in age. The ethnic distribution of students primarily included Malays (59.2%), Chinese (30.8%), and Indians (6.7%) with indigenous Sabah (1.7%) and Sarawak (1.7%) students forming a minority. The vast majority of students (93.3%) were satisfied with their choice of career. On analysis, it was evident that male medical students were driven by their previous excellence in science in school (90.2%) and their belief that medical education would lead to a defined and secure profession (85.4%). Amongst female students, key motivational influences included an opportunity for social and humanitarian work (89.9%) and an interest in human biology (87.3%). Top motivational factors, regardless of gender, included opportunities in medicine to care for people (86.7%) and interest/ previous excellence in science in school (81.7%). **Discussion:** The sample under study was fairly representative of the multi-ethnic Malaysian population as a whole. Thus, it is significant to note that first year Malaysian students remain very satisfied with their choice of career, and are largely spurred by their desire to emulate previous successes in science in pre-university, a similar finding to British students (Allen 1988). Interestingly, perceived job security and a financially rewarding career increasingly feature as motivating male Malaysian students. Many female students, however, who cited humanitarian concerns as influencing their career choice may be expressing a more idealistic nature than males (Frey 1980). **Conclusion:** Bearing in mind that tomorrow's doctor is shaped by manifold influences, it is heartening to note that after two decades of development (Malaysian Medical Association 1980), altruistic reasons still remain the key motivational factor driving medical students in Malaysia.

EXPERIENCE OF CURRICULUM CHANGE IN THE COLOMBO MEDICAL FACULTY

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Objectives: Describe the process of curriculum change

The Faculty of Medicine, University of Colombo is the second oldest medical faculty in the South Asia. A major review of the curriculum began in 1990. Planning the reforms, capacity building and preparation took 5 years.

The new curriculum was introduced in 1995.

Description: Four overlapping phases are recognizable.

1. Appreciating the need for reforms using informal consultations and discussions with alumni, teachers and colleagues, and several formal meetings.

2. Developing a concrete plan: in 1990, a mandate was obtained for curriculum review which was followed by:
   - 2.1 Agreeing on models to describe the curriculum and directions of reforms
   - 2.2 Developing a mission statement, new objectives and expected competences (1991)
   - 2.3 Meeting to develop recommendations regarding identification of contents, organization of contents, assessments, educational strategies, resources needed and management structure
   - 2.4 Agreeing on the macro structure of the new curriculum, its principles and on strategies to achieve it (1991)
   - 2.5 Meetings to identify contents, which shifted later to develop details about the macro structure
   - 2.6 Developing detailed recommendations regarding the contents, assessments and newer teaching learning methods based on experiences and recommendations of teams undertaking fellowship abroad (1992-1996)

3. Implementation - Teachers have dual responsibilities to the old and new organizational structure. An implementation committee was formed of the stakeholders to monitor the initial period. The administration headed by the Dean managed the continuing implementation from 1995 onwards. The students were sensitized during period of induction and workshops were held to train teachers.

4. Institutionalizing reforms

Meetings were held with the Sri Lanka Medical Council, to gain approval and by-laws amended to the Universities Act.

Conclusions: Changing a conventional curriculum in mid-course creates several challenges. Medical schools in Asia would benefit from studying the process used in Colombo.

THE INNOVATIVE CURRICULUM OF THE COLOMBO MEDICAL FACULTY

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Introduction

The Colombo Medical Faculty undergraduate medical education programme has been based on a traditional curriculum in keeping with British system. A major review followed the introduction of a new curriculum took place in 1995.

Objective

To describe key features of the new curriculum and the educational principles underlining them.

Description

The key features of the new curriculum are:

1. Organization into five streams spanning the five-year programme.
2. Teaching of Behavioural Sciences comprising key component modules from first to the final year.
3. Emphasizing community orientation in the five-year community stream teaching programme through: faculty based inputs on principles of health promotion, prevention, demography, epidemiology and statistics; a two year family and community attachment; clinical-oriented case studies in the final year.
4. Teaching of Introductory Basic Sciences Stream (IBSS), from term 1 to 4 (Physiology, Anatomy, Biochemistry, Pathology, Microbiology, Parasitology and Pharmacology).
5. Applied Sciences Stream, from Term 6 to 13 comprising system and topic based modules following IBSS.(e.g. Nutrition, Growth & Development, Cardiovascular etc.).
6. Clinical Sciences Stream, from year 1 to final year comprising an Introductory Clinical Sciences component, 104 weeks of clinical rotations and 36 weeks of Professorial appointments in Clinical Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics and Psychological Medicine.

The following educational principles underline the new curriculum.

1. Integration horizontal and vertical through system based modules, IBSS and Problem based learning.
2. Emphasis on Student-centred learning.
3. Achieving Relevance to practice.
4. Early exposure in clinical and community setting.
5. Emphasis on behavioural sciences.
6. Development of transferable skills.
7. Continuous assessment.

THE SUBJECT-STYLE CURRICULUM STRUCTURE REFORM OF SOME CLINICAL MEDICINE COURSES

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The subject-style curriculum structure of clinical medicine is a curriculum system which is the combination of internal relations of every subject' professional knowledge and it is to realize the goal of training for medical student. A reasonable curriculum structure has a great significance in assuring the teaching quality and realizing the goal of specialized training. To meet the needs of comprehensive quality of talents in the 21st century and to adapt to the changes of the medical model, the goal of training the clinical medicine specialized talents, who have a certain potentiality, is to make them have an all-round development of morality, intelligence and physique, and own a solid basic knowledge and a strong capability of practical working. In order to better understand the connotation of the university students' comprehensive quality in the 21st century, the principal coordinated every subjects which is under the whole goal of clinical teaching becomes the guiding ideology and important principal of curriculum structure reform. The contents of giving lessons involved with this task are: primary hyperthyroidism, peptic ulcer, acute pancreatitis, primary liver cancer, hepatocirrhosis and portal hypertension. The lessons are given together by the teachers of internal medicine and surgery.

It is proven by practices that from the view of holism, systematicness and functionality, this research starts with contents which are belonged to both internal medicine and surgery in the current clinical courses but lack the good linking between them, and under the whole goal, re-understands and rebuilds the curriculum structure, trying to reorganize the knowledge of the linking of the internal medicine and surgery, time allotment, the content selection and teaching styles during the teaching according to the teaching syllabus' requirements. Under the whole goal, the coordination of every subject will prompt the students to have the more systematic and unitary knowledge, and realize "less" and "pith" in the course of teaching.

BASIC CONDITIONS OF TRANSFORMING MEDICAL KNOWLEDGE INTO CLINICAL SKILLS

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Based on the theories of pedagogy and educational psychology, the present paper attempts to discuss the process of how medical knowledge is transformed into clinical skills and the basic conditions of the formation of clinical skills, which include medical knowledge, standardized training, sound clinical thinking quality, scientific methods and medical experts (teachers). This paper also presents the effective methods for clinical training.

IMPORTANT ACTING OF REFORM LAB MANAGEMENT SYSTEM ON DEVELOPING THE BENEFIT OF RUNNING MEDICAL COLLEGE

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As far as reforming the lab management system is concerned, it appears even more important in improving the benefit of running medical colleges. Attempts are made to look into this problem according to the actual practice in our college.

1. Optimizing available lab resources to developing the benefit of running medical colleges

Since 1998, our college has been carrying out the reform lab management system aiming at optimizing available lab resources and improving teaching quality. This measures take obvious effects:

(a) It gets rid of some phenomenons, for example, some lab technicians are very busy while others remain idle. It demands that a technician not only be good at his (her) field, but also acquire some knowledge in other fields so lab technicians of different field can be redeployed according to actual needs.

(b) The rate of vacancy of lab rooms greatly decreased.

(c) Lab equipment can be shared, so the redundancy of purchase can be avoided.

2. Improving the benefit of running medical colleges by means of scale enlargement

Because lab teaching is carried out in smaller classes, it demands lots of equipment, materials and animals, etc. As a result, the condition of experiment teaching becomes the impel in enlarging the school scale. The reform in lab management proves to be effective in our college in solving this problem. The number of enrollment in our school doubled from 470 in 1999 to 920 in 2000, while the number of lab rooms and technicians didn't increase.

3. Improving the benefit by means of fine quality

Reform in lab management system ensures the improvement of teaching quality in the following aspects:

3.1 *Introducing modern measures in lab teaching by scientific designing and convergent launching*

The new model in lab management system makes it possible to have a unity in lab construction and to have a better use of limited capital.

These advanced measures in lab teaching not only arouses students interested in their studies, offers them more chances to practice by themselves, but also, aggrandize their creating ability.

3.2 Regularization of laboratory management; improvement and implement of a series of rules and systems

Based on the principle of upgrading management and achieving benefits. Our college successively establishes a series of regulations and systems concerning the planning and construction of laboratories, management of equipment, personnel administration and management of experimental teaching etc.

3.3 *Promotion of reform of experimental teaching contents*

The quality education raises the new requirements concerning the lab-teaching contents of the medical subjects. As a result, it is enforced to abandon the experiments of repeated and out-dated contents, to decrease the number of experiments of pure reification, and correspondently increase the number of experiments of creativity, synthesis and reform of the laboratory management has provided the ground and the feasibility in all aspects.

4. Control of the teaching cost and promotion of college-running efficiency

There exists an obvious gap of cost between direct experimental teaching and theory teaching with the approximate proportion as 3-4:1. Therefore, efficient control of experimental teaching cost not only helps to overcome the difficult situation resulted from insufficiency of teaching funds but embodies a deeper financial significance.

The benefits of the reform practice upon the control of advanced teaching cost are as follows:

(1) It efficiently controls the cost of reagent and materials for experiment use.

(2) It efficiently controls the costs of animals for lab use.

To sum up, more and more importance has been attached to the promotion of efficiency in running a medical college, and the undertaking of reform upon lab management will undoubtedly help to push a step forward.

ESTABLISHING THE NEW IDEA OF MEDICAL MORALITY

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As the development of market enconomy and the change of medical mode, the pluralistic peculiarity has occurred in the people's idea of medical morality. The essay suggests how to carry forward the traditional essence of medical morality and establish the new idea of medical morality. It is important to improve the construction of medical morality and normalize the behavior of medical workers.

AN EXPLORE ABOUT CLINICAL TEACHING ACTIVITIES AND MANAGEMENT REFORM

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For the total purpose of medical education, efforts were made to perfect teaching system, reform teaching contents, create teaching conditions, improve teaching environment. Computer training and examinations were carried out during the teaching of clinical practice; advisors of clinical practice were selected in every clinical department of grade III; an operating laboratory of training for basic technical ability was established; every trainee student was evaluated by means of score record in a handbook; the teaching method of unifying kinds of disease was used. It was avoided that teachers did at their ease and nonstandard during teaching and examinations. The shortcomings of less kinds of disease and manipulating chances were overcome. Students were trained generally, systematically, and standard for mastery of clinical techniques. The professional thoughts and morality of students were also strengthened.

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