ABSTRACT NUMBER: OC1

PBLs Or Lectures: Does It Matter?

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Introduction: Different learning situations are used in integrated medical undergraduate curricula all over the world. Lectures, problem-based learning activities (PBL), small group discussions (SGD), bed side and community teaching, computer assisted learning (CAL) and teaching/learning at clinical skills units are the most frequently used educational tools. There is much debate as to the superiority of these delivery tools in relation to their effectiveness in student learning process. While student satisfaction is usually higher in PBL, the test performance was more variable. Measuring the effectiveness of different delivery tools can be achieved by using qualitative and quantitative methods. Evaluating the student performance at assessments is one such quantitative method.

Lectures and PBL are used in the teaching/learning process of the reproductive system course in the phase 1 medical undergraduate curriculum at International Medical University (IMU)

The objective of this study was to compare the effectiveness of lectures and PBLs as a delivery tool, considering the outcome of the student performance at the end of course assessment.

Method and Materials: The question paper was pre set so that some questions were based on the content areas covered only by PBLs, some based on the areas covered only by lectures and the rest on the areas covered by both.

The answer scripts of 170 students were thoroughly studied and the marks obtained for questions based on PBL and lectures were documented. To maintain standardization, examination components from the PBL and lectures were marked out of 25. Questions from areas covered by both PBL and lectures were excluded. Special marking format was used to minimize inter rater variability. The assessors were also briefed prior to marking the selected questions. The document analysis method was used in data analysis. The difficulty indexes for PBL based questions and lecture based questions were computed.

Results and Discussion: The difficulty index for PBL based questions (0.665) and lecture based questions (0.510) were comparable.

The mean score for the questions from areas covered in PBL was 18.81 while the minimum and the maximum scores are 9.50 and 23.50 respectively. Similar pattern also found for questions on areas covered by lecture, mean score being 18.12 and the minimum and maximum scores 11.50 and 24.50. The coefficient of variation for scores from both categories was well below 15%, indicating that the scores are fairly consistent.

There was a negligible linear relationship between the scores of PBL based questions and lecture based questions with a correlation coefficient of 0.183. To assess whether this pattern is consistent for students with all levels of ability, the scores were reclassified into two categories. Those with scores of 16.5 and above were categorized as high achievers while those below the mark were defined as low achievers. The reference point 16.5 was derived using the 65% passing mark criteria used by IMU.

The percentages of low achievers for questions based on PBL as well as lectures were used to subjectively gauge the effectiveness of the mode of delivery. For PBL based question, 14 (8.2%) students fall into the low achiever category. On the other hand for lecture based questions 38 (22.4%) students fall in the low achiever category (p 0.001). The percentages of low achiever for PBL based questions are significantly lower than the lecture based questions implying that the PBL is a better mode of delivery compared to lectures.

In exploring whether the PBL method is equally effective for the low as well as high achievers, the cross tab analysis was done. The low achievers in questions based on lecture were compared for their performance in PBL based questions. The result shows that 31 (81.6%) of low achievers in lecture based question did fairly well in PBL based questions. The high achievers in the lecture based questions were compared for their performance in PBL based questions and It showed only 5.6% of them did fairly poor in PBL based questions. These results indicate that low achievers in lecture based questions did well in PBL based questions. In contrast only small percentage that did well in lecture based questions faired poorly in PBL based questions. This indicates that PBL is more effective as a delivery tool for both high achievers and low achievers

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ABSTRACT NUMBER: OC2

Evidence-In-Action: How Students Can Learn T o Use EBM During Clinical Encounter

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Introduction: With the explosion of medical information, information mastery and acquisition of the skills of evidence-based medicine (EBM) by medical students is now regarded as essential components of medical training (General Medical Council, 2003). Students' receptiveness to EBM may improve if there is better fit between EBM concepts and its clinical relevance (Ghali, 2000). In this paper, I will demonstrate how the clinical encounters at the ambulatory setting æ with the frequent occurrence of clinical uncertainties in diagnosis and therapy æ can be effectively used to demonstrate the value of EBM in clinical practice.

Materials and Methods: In the past three years, IMU Clinical School has introduced a required component called "EBM commentary" during a four-week rotation in Family Medicine in Semester 8 (equivalent to Year 4). During the first week of the rotation, some basic concepts of EBM (e.g. sensitivity, specificity, predictive values, study designs and hierarchy of evidence, etc) were revisited in an interactive small group session using paper-based case scenarios. Over the course of four weeks, students were expected to identify one patient with either a diagnostic or therapeutic uncertainty, and then narrow down the specific clinical question. Thereafter, the students conducted a search of the EBM resources (such as Guidelines, Cochrane Library, EBM abstracting services or PubMed). After evaluating the relevant citations, they then wrote a 500-word commentary, with an appropriate emphasis on the application of the retrieved evidence to their patients. Students were required to submit a draft commentary electronically, and following a face-to-face small group discussion, they then revised their written commentary.

Results: Over the past three years, about 300 EBM commentaries have been submitted; the topics covered illustrated the breadth of family practice. There was a predominance of therapeutic problem rather than diagnostic issues, reflecting the focus of the clinical rotation. Noticeable improvement in the quality of the final submitted commentaries was observed after specific feedback was provided to their draft commentaries. Students were able to cite more relevant citations of original research, e.g. randomised controlled trials and systematic reviews. However, their ability to apply the cited findings from original research, as noted in their written commentaries, is still somewhat suboptimal.

Discussion: Improving the EBM knowledge and skills of medical students is challenging (Del Mar, 2004; Hatala, 2002), however, successful teaching has been demonstrated in the ambulatory care setting (Thomas, 2001). A repeated exposure in both classroom and clinical settings are needed but is currently hampered by the lack of speedy electronic information sources at the point of care and sufficient number of faculty role models familiar with EBM. The EBM commentary described above is an attempt to operationalise the four-step EBM process in an ambulatory care setting without online access: clinical question is generated from an actual patient encounter, accessing and appraising retrieved evidence are done outside the clinical setting, and application of the evidence to patient care is attempted by means of a written commentary and case discussion. Bearing in mind that critical appraisal of original research need good command of the clinical epidemiology (not achievable at this level of our students), we encourage instead the use of the pre-appraised EBM resources (e.g. Clinical Evidence, EBM journal, Cochrane Library, and clinical practice guidelines). Writing commentary forces student to read the retrieved abstracts or summaries critically and to reflect on their applicability. Another benefit of this assignment is to get them to learn the appropriate referencing style of journal articles. While their ability to apply evidence in patient care may not be optimal, this is consistent with their evolving knowledge base and familiarity with clinical practice (Schwartz, 2003). Repeated exposure to such exercises in other clinical rotation is expected to hone their skills in all four steps of EBM process.

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ABSTRACT NUMBER: OC3

In-Service Training Needs Required By Staff Nurses In State Hospitals In Peninsular Malaysia

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Introduction: The paper focuses on the critical areas necessary for the in-service training of staff nurses in four state hospitals of Peninsular Malaysia, namely in Penang, Kuala Lumpur, Johor Bahru, and Terengganu.

Objective: The objective of this study was to gather information from the hospital managers, doctors, senior nursing staff, staff nurses and patients regarding the quality of services and the areas nurses require to improve in their professional work.

Materials and Methods: Data was collected from 1007 respondents: 259 respondents in the Management and Professional group, 353 staff nurses, and 395 patients. The research instrument used was a questionnaire that consisted of

two sections: Section I on demographic data of the respondents; Section II on the critical aspects of training in the in-service training and professional development of the staff nurses. Section II of the questionnaire consisted of two sections: II (a) and II (b). In Section II(a) the respondents rated the criticality of each task, according to 30 tasks in the staff nurse's work profile, along a rating scale of 1-7 (1 for "totally not important" and 7 for "most extremely important"). In Section II (b) the respondents rated the current level of performance of the staff nurses according to 30 tasks in the staff nurse's work profile, along a rating scale of 1-7 (1 for "extremely poor performance" and 7 for "excellent performance"). A significant difference in the mean score between the two ratings in Section II (a) and II (b) indicated a training need in that specific area.

Data analysis was carried out using the SPSS Version 11.0 Program.

Results: The results revealed that all the respondent groups viewed staff nurses required training in all tasks except one task related to "making do with limited resources". Tasks related to "using equipment in caring for patient", "assessing patients' needs", and "interpreting own practice data" had the highest priority, while tasks related to research had the lowest priority.

Discussion: The foremost implication is that training needs for the in-service and professional development of the nurses in the state hospitals in Malaysia should emphasise on not only clinical activities, but also in other aspects as indicated by the findings of the research.

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ABSTRACT NUMBER: OC4

The Pedagogical Worth Of Anecdote

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Introduction: Calls for the educators of health care professionals to imbue the curriculum with the principles of EBP (Evidence Based Practice) remain strong. Notwithstanding the obvious merits of this philosophy, there are risks that it may lead to a preponderance of teaching methodologies and styles rich with reference to the literature yet deft in the exposure of students to the valuable anecdotal accounts of experienced clinicians. Whilst our primary educative objective is to provide students with the facts, how best to make the facts "stick" in students minds should be of no less concern.

Method: In a small study conducted at the Division of Chiropractic at RMIT University, students were presented with information on the presentations of ten clinical disorders. Information on five of the disorders was presented in lecture notes, through a classroom power point presentation and reference to a prescribed text and specific internet sites. Information was presented as factual and decontextualized in terms of any personal views held by the lecturer regarding the disorder. Information on the remaining five disorders was presented in lecture notes and a power point presentation which emphasised the lecturer's clinical experience with and personal opinions regarding the disorder. Students were then examined on their knowledge of the disorders. Students were also surveyed as to the sources of information and methods of learning they found most useful in learning about the disorders.

Results and Discussion: Students scored best on examination questions assessing the disorders presented as anecdotal accounts of the lecturers experience with the disorders. Students felt that anecdotal accounts provided by lecturers were the most useful ways of learning about the clinical presentation of disorders. Whilst this does not account for issues of the validity or veracity of anecdotal accounts, their use as valuable pedagogical tools should not be discounted.

ABSTRACT NUMBER: OC5

Using Bubble Chart Diagrams to Implement the 8 IMU Outcomes in Assisting Bedside Teaching

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Introduction

Bedside teaching-learning (BST) has varied methodology and experiential learning methods using live-patients in the hospital wards are expected to complement various other teaching modes to meet the objectives of the clinical posting.[1] BST can be chaotic and frustrating when teachers and students are unaware of the depth and breadth of the subject to be covered and the clinical skills to be acquired within the stipulated time. More often than not one or two students may be assigned to prepare a clinical case for presentation and discussions are allowed to meander around the subject limited by student response, time constraints and teachers' enthusiasm.[1] Application of theory to practice in BST may not be possible with many such encounters. Patient fatigue and non-cooperation, passive Q-A approaches and increasing student numbers in the wards require innovations[2] in effectively conducting BST and at the same time meeting the 8 IMU outcomes. The objective of this paper is to discuss a system the author uses to conduct BST in attempting to overcome some of these challenges.

Materials and Methods

Semester 9 students at the IMU who are assigned to the Gynecology ward attend formal BST conducted by both

public hospital OBGYN specialists and lecturers from IMU. A wide variation in teaching methodologies are seen with some converting a proportion of the time allocated (about 1 hour) to didactic teaching on the subject matter delivered around the patient. The objective of BST, mindful of the sensitivities of patient confidentiality and patient fatigue, is to utilize the clinical setting to apply theory to practice. The main author attempts to meet two main objectives during BST i.e.

i. Case identification to create awareness to the range of cases available.

ii. Clinical trigger and clinical signs to initiate in-depth discussion using bubble chart diagram.

Generally when students are in the Gynecology posting they are assigned in small groups to specified patients for clerking and examination. They are left to their own learning methods. At BST all students get together and twenty minutes are allocated for a quick ward tour where each student assigned to specify cases is to state the presenting problem (clinical trigger) and the diagnosis. This activity allows all students in the group to be aware of the range of cases available triggering further learning activities at a later stage (group learning, task based learning and fine tuning clinical signs). One patient is then selected for the day for in depth discussion. About 20 minutes is allowed for the student allocated to the indexed patient to exhibit his ability to demonstrate relevant history taking and clinical signs. This reduces patient fatigue, improves student attention and sets the scene for the third phase of BST (bubble chart class room learning). All students are then taken to the side room where the main presenter conducts the rest of the session with the teacher facilitating the activity.

The clinical trigger (e.g. vaginal bleeding in early pregnancy) is the centre of the bubble chart diagram. Then the factors leading to the complaint are developed and more bubbles are added as students begin discussing issues related to the 8 outcomes of the IMU. This diagram allows students to appreciate a holistic approach to patient care including developing a diagnosis, requesting for relevant investigations, and appropriate management. The students are also expected to outline short and long term outcomes after appropriate treatment considering the health resources available and the community at large.

At the end of the exercise students are expected to re-look at the 8 IMU outcomes to see if all domains (basic science knowledge, etc) have been touched on.

Results

At the end of the teaching session students provide verbal feedback that they are able to learn better in clinical setting where the number of students are huge. They also manage to cover a wider range of clinical cases in one session. By using the bubble chart diagram they reported that they are able to discuss in-depth on the clinical trigger given and able to appreciate better holistic care for patients. All 8 IMU outcomes are appreciated better by the students in this teaching method.

Discussion

BST is a challenging exercise and in the present circumstances, requires novel methods to exploit adequate utilization of clinical material without compromising teaching- learning activities and to continue sustaining patient co-operation. Conventional teaching methods adopted in the clinical setting may need adaptation especially when utilizing live patients to demonstrate clinical signals and to appreciate the burden of disease in the community.[3] Increasing student numbers, introduction of ambulatory care, changing patient expectations and profile and reluctance to cooperate (in some) are limiting factors for uniform direct student-patient encounter. The three phase method discussed expose the student to a range of clinical material available, shortens direct student-patient contact and permits a holistic approach of care as enshrined in the 8 IMU encounters.

Classroom teaching-learning activity at the end of the clinical session allows time for students to reflect on the case and management and improves attention. Bubble chart diagrams are valuable tools as students appreciate the development of cause and effect relationships to the trigger identified complementing direct student-patient encounter. The introduction of the 8 domains (IMU outcome) at the end of the session as a check-list assists students to appreciate a holistic approach to patient care. Continued use of such an approach would reinforce the shortcomings seen in applying theory to practice at BST and better prepare students for clinical practice. Though no formal evaluation has been done, results from students 'positive reflection' reports (which they are required to write at the end of the 3rd week in Gynecology) indicates good student uptake to this approach. Further formative evaluation may contribute to improvement in the teaching tool used.

Conclusion

The paper incorporates improving teaching-learning activities at BST by formalizing three phases including classroom teaching using bubble charts to appreciate holistic management as outlined in the 8 IMU outcomes.

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ABSTRACT NUMBER: OC6

Our Shared Biomedical Language

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Introduction: Effective communication stands at the heart of education, research and clinical practice. With the globalization of health sciences education, research and practice, a shared language, which we might call Biomedical Language, has emerged. We are all native speakers of Biomedical Language because, regardless of our linguistic backgrounds, we contribute collectively to the development of this lingua franca. However, the acquisition of fluency in this language is not intuitive in the way that first language acquisition appears to be for children. It therefore stands to reason that we could achieve greater fluency and function more effectively in our professions if we thoughtfully observed and thoughtfully contributed to the development of our shared language.

Methods: In this presentation, the methods of applied linguistics, including corpus analysis, are brought to bear on the biomedical literature in order to identify that which is distinctive about, for example, the vocabulary, syntax, semantics and pragmatics of Biomedical Language.

Results: Biomedical Language is significantly different from English to the extent that, in the terms of comparative linguistics, it is certainly a highly distinctive dialect and, some might argue, would qualify as a language in its own right. The most notable feature is an enormous technical vocabulary which is largely unknown and difficult to access for native English speakers without the relevant specialized knowledge, and which is derived from a large number of languages. Very well established grammatical conventions are obvious. Rules of discourse are quite explicit in a number of areas. Mutually incomprehensible dialects abound.

Discussion: Many of the distinctive features of Biomedical Language may be described in objective and quantifiable terms. This knowledge has obvious and immediate implications for such real world issues as language teaching, university admissions and professional licensing. Standard dialects of English are quite distinct from Biomedical Language. Therefore, the concepts of Biomedical English (versus Biomedical Language) and native speakers thereof (i.e. native speakers of Biomedical English) should be de-emphasized in Biomedical Language learning and assessment, and in the area of biomedical publication.

ABSTRACT NUMBER: OC7

Semiotics In The Education Of Chiropractors: Facilitating Learning By Quantifying An Abstract Object

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Objective: To explore whether the philosophical tools of semiotics, proxemics have a use in the education of chiropractors and others who required to learn quantification of abstract objects.

Discussion: The absence of intra-discipline agreement on the existence of the core tenet of the chiropractic discipline, the vertebral subluxation complex, let alone its various clinical dimensions, presents chiropractic educators with the challenge of how to best teach this enigma. This paper argues there is a way to apply semiotics within the theory of abstract objects that may overcome the limitations of conflicting mechanical descriptors in general and their lack of substance in particular.

Conclusion: These philosophical concepts of knowledge creation may form a useful tool-kit for chiropractic educators who are looking for a way to achieve best-practice in the design of learning and teaching materials that relate to the identification of an abstract spinal lesion. In turn these processes may find application for other educators teaching abstract objects.

INDEX TERMS

MESH: CHIROPRACTIC EDUCATION; CLINICAL COMPETENCE.

Index to Chiropractic Literature: COMPETENCY-BASED EDUCATION; EDUCATION, CHIROPRACTIC; EDUCATION, CHIROPRACTIC/AUSTRALIA; EDUCATION, CHIROPRACTIC/STANDARDS; EDUCATION. CHIROPRACTIC/TRENDS.

Other: SEMIOTICS; PROXEMICS

Key terms defined

Semiotics: the study of patterned human behaviour in communication

Semiology: the science of signs

Proxemics: the tactile mode of semiotics – interpersonal movement and touch activity

Spinal lesion: a putative inter-segmental dysfunction in the spine

Subluxation complex: the chiropractors' spinal lesion

ABSTRACT NUMBER: OC8

The Development Of A New Medical Curriculum In Lao PDR

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Introduction: Lao People's Democratic Republic (PDR) is a landlocked country bordered by China, Vietnam, Myanmar, Thailand and Cambodia. The population is estimated at six million of which 80% reside in rural areas. It is one of the most impoverished countries in the South Pacific Asia region. Based on the country's health indices the WHO ranks Laos in the bottom 20% in the world. In 2001, the Faculty of Medical Sciences (FMS), National University of Laos (NUOL) invited the University of Calgary in Canada to assist in the development of a new medical curriculum that would lay the foundation for improving the health care of their people.

Educational Background: High school education is far from equivalent to the 'A' levels in Malaysia, especially in the remote mountainous areas where many of the Lao medical students come from. Students spend their first year at the NUOL (the only university in the country) in the capital city of Vientiane to upgrade their knowledge in the basic physical sciences (D1). (D1 refers to the first year in the Doctor of Medicine program). They then transfer to the FMS to begin a five-year degree program in Medicine (D2-D6). The new medical curriculum is now in its third year.

Mission Statement: 'Working together to improve the health of all the people in Lao PDR'.

Goals: 'To train doctors to be capable of working in hospitals in any community in Laos; who have the knowledge, skills and attitudes that are needed to improve the health of the people'.

Intent of the new curriculum:
We will:

- educate physicians to work in any hospital or community in Laos
- develop a new curriculum based on the health needs and disease patterns in Laos
- increase our students understanding of community health and disease prevention
- implement an innovative integrated curriculum that will make our students better clinical problem solvers
- teach in a clinical context to help our students understand the relevance of their learning
- foster a learning environment that is more student centered and less teacher centered
- define all the clinical competencies expected of our graduates (outcome objectives)
- write Study Guides that will contain the objectives and content for each course derived from the outcome objectives
- plan all our learning experiences based on the objectives of the course
- ensure that the evaluation of student performance is valid and reliable and measures the application of knowledge rather than the memorization of facts
- implement a new Medical Skills Course which will run as a theme throughout the curriculum
- improve our skills as teachers through a faculty development program.

Outcome Objectives: The faculty adopted a list of 102 clinical presentations that were considered most commonly encountered in Laos (1). The objectives of the curriculum are based on improving the students' ability to accurately diagnose, prevent or treat the major causes of these presentations with an emphasis on clinical skills. These **outcome objectives** are the foundation upon which the entire curriculum has been designed.

Preclinical Curriculum (D2 and D3)
Year D2 begins with 4 weeks of Introductory Courses which include: (1) The chemical and cellular level of organization within the body; (2) A framework for understanding the anatomical structure of the body and the function of the body systems; (3) The genome, genetics and embryology; and (4) Concepts of healthy living. The basic medical sciences (anatomy, physiology, biochemistry, pharmacology, microbiology, parasitology etc.) are **integrated** into 9 body systems courses, each of approximately 5 weeks duration. The structure of each course is based on an anatomical or normal physiological framework and the pertinent information from the basic medical science disciplines is incorporated in relation to each body system. Community Health is taught throughout as a continuous theme.

'Clinical triggers' are simple clinical vignettes that have been introduced to illustrate the relevance of the basic sciences to clinical medicine. They are designed to form the basis of small group learning. The content of all courses in the preclinical years is based on the outcome objectives. Study Guides have been created that include the learning objectives, the timetable of didactic teaching and independent study time, references and the 'clinical triggers'. Study Guides are a new phenomenon in medical education for this institution. Furthermore, teachers are providing students with their lecture notes which the students have to pay for copying.

A new Learning Resource Centre (LRC) has been developed in the FMS. LRC Stations, organized by body system, contain posters, models, books and other reference materials (CDs and internet resources). Many LRC reference books are provided in Thai. A computer laboratory with over 30 stations is also available for student use, in addition to a limited medical library.

Clinical presentation curriculum (D4 and D5)
The clinical curriculum consists of two parts: (1) a theoretical component made up of lectures and small group case discussions and (2) a clinical skills component which takes place in the affiliated teaching hospitals in Vientiane. The D4 curriculum was recently launched in November 2006.

Using 102 clinical presentations (CP's) considered relevant to Laos, a series of clinical reasoning maps are being developed. The clinical reasoning maps apply focused features from history taking, physical examination and available lab tests to guide students in making a diagnosis of the common diseases causing each CP. The CP's are grouped into body systems courses that parallel the preclinical curriculum. The clinical reasoning maps serve to define the topics, objectives and the content of each learning experience, to which teachers are then assigned and a timetable for the courses constructed. Small group discussions, held once a week, are based on a written clinical case of the CP being studied.

Clinical teaching occurs once each week at all the affiliated teaching hospitals. Study guides remain a constant fixture of the curriculum, and an essential part, that is now included, is the blueprint for the MCQ examination at the end of each body system course. The end-of-year examination will be an OSCE.

Supervised Clinical Experience (D6)
The last year of the curriculum will be a supervised clinical experience that will involve rotations through the clinical departments of internal medicine, pediatrics, obstetrics/ gynecology, general surgery and emergency medicine, and is currently in development.

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ABSTRACT NUMBER: OC9

IMU Doctor-patient Communication Skills Training Programme: How Successful Is It?

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Introduction: Communication skills are considered one of the essential components of clinical competence (Kurtz et al., 2005). This assertion is based on overwhelming evidence that supports the positive influence of communication skills training in improving doctor-patient communication, patient satisfaction and outcome of care (Aspegren, 1999). As such, teaching communication skills in medical schools should no longer be an option. Unlike the West, medical institutions in Malaysia have only recently introduced communication skills training programme in the undergraduate curriculum. The International Medical University (IMU) is one of the pioneer medical institutions which implements a systematic doctor-patient communication skills training programme that extents throughout the pre-clinical undergraduate curriculum (Lukman et al., 2006a). An ongoing series of studies are conducted to evaluate the efficacy of this training programme. The aims of this paper are to highlight the evidence collated so far and to discuss the implications of the findings for the teaching and learning of doctor-patient communication.

Materials and Methods: Efficacy indicators for the training programme include students' 1) attitude 2) conceptual knowledge, 3) perceived competency and 4) practical competency. All indicators are within the context of doctor-patient communication. A longitudinal study with a before-after design was used to track one particular cohort's progress on the aforementioned indicators as they advance through the training. In addition, a control group (i.e. a cohort who had not been exposed to the training programme) was recruited prior to the implementation of the training programme. The intention of including a control cohort was to conduct a between cohort comparison study to investigate differences, if any, in conceptual knowledge of and practical competency in doctor-patient communication.

Results: To date, the longitudinal study reveals that following the exposure to the doctor-patient communication skills training programme, students' attitude were more positive towards the need for good doctor-patient interactions, they perceived themselves to be more competent in interpersonal communication and they had a better conceptual knowledge of doctor-patient communication (Lukman et al., 2005). In addition, those who had good knowledge tend to perform better in their communication skills Objective Structure Clinical Examination (Lukman et al., 2006b). The between cohort comparison study shows that the cohort who received training achieved higher scores on conceptual knowledge of doctor-patient communication than the cohort who did not receive training. However, the role of training in practical competence between the two cohorts awaits further analysis.

Discussion: The findings of the studies evaluating the IMU doctor-patient communication skills training programme indicate that the programme has met the efficacy indicators noted previously. Therefore the programme is successful to a certain extent i.e. within a controlled educational environment. However, it is important to note that competence demonstrated in the early phase of medical programme may not necessarily predict performance at a later stage or when students commence professional practice in a real clinical setting (Rethan et al., 2002). A longitudinal study is in progress to determine the long-term predictive validity of the training programme.

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The Current Scenario And Rationale For The Change Of Allied Health (Physiotherapy) Education In Malaysia – An E-Survey

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Introduction: The profession of physiotherapy is one of the most sought after professions in the present times. It can be seen right from the time the students give this as one of the top most choices while choosing their careers soon after schooling. Besides, the demand of the profession in the country and outside has also made it very popular. With the increasing demand, the number of colleges offering such courses has also increased in other countries, and many Malaysian students have started migrating to various countries to pursue degree in physiotherapy due to lack of need based education. Hence, this causes more financial burden on parents. Therefore, there is a need to design the rationale for the change of physiotherapy education in Malaysia.

Aim: To survey the current scenario (position) and rationale for the change of allied health (physiotherapy) education in Malaysia.

Material and Method: Internet based survey using search engines like Google, Altavista, Yahoo and news edition and educational universities websites.

In the present survey we have searched many universities of Malaysia, India, Canada, and USA. The search revealed that in most of the developing and in all developed countries, there is physiotherapy education starting from diploma to PhD level, however, in Malaysia we have only diploma in physiotherapy. According to the study in the present health status, physiotherapists have important roles in preventive, rehabilitation (short term and long term) and therapeutic intervention.

Physiotherapists evaluate and treat many conditions with orthopedics problems, neurological problems, cardiopulmonary problems and ergonomics and geriatric health care. However, to treat these patients' populations we need to be highly qualified (Bachelor or Master level education) and also we need to be recognized by the regulatory body of various countries.

The search also revealed that in Malaysia with only 600 physiotherapists in the country and people becoming more health conscious, there is growing demand for specialization in this field. **"People who exercise often tend to sprain something and this is when the physiotherapist come in" (Physiotherapist Marc Daniel, Star Education 2006 Fair , KL Convention). Therefore, more and more people are turning to physiotherapist for treatment**

Malaysia is facing not only a shortage of doctors but also allied health professionals. According to the Health Minister of Malaysia, Datuk Dr Chua Soi Lek. **"There were only 61,472 health care professionals and 129634 more are needed. By the year 2020, a total of 255,791 allied health services personnel will be needed.**

Rationale for the change

The required knowledge, skills and behaviours of physiotherapists are increasing in complexity, and education of physiotherapists must also evolve. The level of autonomy requires the systematic learning of skills in differential diagnosis that may not previously have been required of all physiotherapy practitioners, when clients had previously been screened by a medical practitioner.

Furthermore, the convergence of professional changes in the health care environment, governance, and the growing workload and financial pressure on the healthcare system have led to the need for a new model of professional education that meets these needs.

As a result of the similar scenario stated above in Canada, The Canadian Physiotherapy Association held a consensus session on June 27, 2002 to discuss the appropriate education level for physiotherapists in Canada. The outcome of this meeting was that "Designed Twenty-one Competencies for the Twenty-First Century and the preferred entry-level educational qualification for Canadian physiotherapists, to practice physiotherapy, is a professional master's degree. By 2010, or sooner, Canadian universities will offer entry-level education programs in physiotherapy only at the level of a professional master's degree". There are 13 physiotherapy programs in Canada, and several have moved (University of Toronto, McMaster, University of Western Ontario, University of Alberta, or are moving, (University of Ottawa, Queen's University, University of British Columbia) to the entry-level Master's degree.

Results and Discussion: The survey highlights, an immediate concern over the limitation in Malaysia with the aid of experts, designed competencies from the pronoun universities would help to satisfy the current need in providing qualified allied professionals with specializations at master and research doctorate levels.

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