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SEAJME

SOUTH EAST ASIAN JOURNAL OF MEDICAL EDUCATION

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Message from Secretary General of the Consortium of Thai Medical Schools

Professor Avudh Srisukri

On behalf of the Consortium of Thai Schools. I would Medical like to congratulate the South East Asian for Regional Association Medical Education (SEARAME) for another successful movement by launching the first issue of this journal. This journal is based on the Journal of Medical Education of Thailand (J MED EDUC THAI). The Consortium of Thai Medical Schools established the J MED EDUC THAI in 2005. Our main objective was to disseminate the knowledge and research findings among medical educators. We decided to use English language so educators outside the Kingdom of Thailand can gain benefits from the J MED EDUC THAI. The objective seemed to be guite fruitful. During the past few years we received manuscripts from medical educators and educationalists working in several countries including countries outside Asian continent. Being the official journal of SEARAME is another important step to achieve our primary objective. It is no doubt that being a part of SEARAME activities, this journal will reach more

readers especially in the countries in this region.

Another big change about the Journal is the publishing process. When we first established the J MED EDUC THAI, we planned to make it only as an electronic journal. However, to better serve the readers in the areas with less access to information technology equipments, the South East Asian Journal of Medical Education (SEAJME) is also published as a hard copy. This process is made possible by the generous support from WHO-SEARO. We gratefully thank them for this.

Finally, I would like to take this opportunity to thank SEARAME in giving us a chance to join this endeavor. I hope this journal will be an important mean for sharing the knowledge regarding the medical education not only among the countries in this region but also other countries elsewhere.

Message from President of SEARAME

Professor Khunying Kobchitt Limpaphayom

On behalf of the South East Asian Regional Association for Medical Education (SEARAME), I would like to thank Professor Avudh Srisukri, the Secretary General of the Consortium of Thai Medical Schools who kindly gave us the opportunity to join the publication on medical education. It seems that we both aim to disseminate the knowledge and experience among medical educators so as to promote the productive benefit for the medical education development. This leads to the idea of changing the Journal of Medical Education of Thailand (J MED EDUC THAI) to the South East Asian Journal of Medical Education (SEAJME).

The SEARAME has been established in order to strive for the highest scientific and ethical standards in medical education, taking initiatives with respect to new methods, new tools, and management of education. medical Thus medical education needs to promote learning, especially self-directed learning and the continuing professional development of life-long learning. To serve all needs in promotion of the development of medical education system, SEARAME has set up the objectives as:

- to foster communication amongst medical educators and medical schools in the South East Asian Region and beyond

- to stimulate the exchange of teaching and evaluation of materials developed

between teachers and institutions, through many ways by maximizing the opportunities presented by the use of modern information technology

- to encourage medical education research being conducted in countries in South East Asian Region and give support to research projects exploring aspects of medical education

- to contribute to the setting of standard in medical education for good practice with regard to teaching and assessment, taking special note of the standards developed by the World Federation of Medical Education etc.

We need to promote the expertise exchange among members. We all need to be working together to support the development of better medical education.

This Journal will be a good platform for the medical educators to share experiences, new knowledge, and research findings. It is also a way to strengthen the bonds among national colleagues with the difference of culture, tradition, policy and demographic in the region that lead to various criteria of medical education.

All manuscripts on medical education are welcomed to this Journal and I would like to thank for the contribution from you all to the Journal as well.

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SEARAME and the journal

Welcome to the inaugural issue of the SEARAME journal. This journal is the culmination of the SEARAME's vision to bring together medical educationists in the region to promote collaborative efforts toward uplifting the standards of medical education in the region and beyond through dissemination of knowledge and information.

SEARAME is one of the six regional associations under the umbrella of World Federation of Medical Education (WFME. 2003), the global non-governmental organization dedicated to setting standards in medical education. Our association was established with the aim of improving the guality and relevance of medical education at all levels postgraduate undergraduate. and continuing professional development in line with the WFME. One of the main objectives of SEARAME is to encourage medical educational research in countries in the South East Asian region. A journal will be the ideal platform to disseminate research findings and stimulate discussion among experts in the field.

The field of medical education is going through a sea of changes with new methods replacing conventional teaching and learning practices. The South East Asian countries are also undergoing the waves of change. Therefore, establishing collaboration between the South East Asian countries would facilitate the promulgation of evidence on best practices in medical education and monitor processes of educational reform. The changes seen in the developed world may not necessarily be the best for Asia and may be driven by resource constrains. Therefore this journal will provide a forum where evidence of what is best for SEAR can be sought and documented and debated.

SEARAME has promoted member countries to develop mechanisms to improve coordination among academic institutions in this region. They are encouraged to develop a framework for improvement of medical education in each country and set national standards in keeping with the global perspectives. We believe that this journal would be a forum for the medical educationists in the region to exchange ideas and share experiences in best practices in medical education to address academic quality improvement thus developing a mechanism to enhance the current practices of medical education based on the highest global standards (WFME, 2003).

Indika Karunathilake

References

World Federation for Medical Education (2003) Basic medical education. WFME global standards for Quality Improvement. Copenhagen, viewed 5 September 2007, http://www.wfme.org.

Relevance of the WFME global standards in medical education to the South East Asian region

Hans Karle

Globalisation of medicine, as manifested by the growing number of migrating doctors and cross-border education providers, is increasing and new medical schools of dubious quality are proliferating, accentuating the need to define and use medical standards in education to introduce effective and transparent accreditation systems, and to find procedures for international appraisal.

The WFME global standards program, launched in 1998, is now being implemented all over the world. The standards are used as a basis for improving medical education throughout its continuum and as a template for national and regional accreditation standards.

A recent development of adapting the WFME global standards to the specific needs in the European region implies that only a few specifications and supplements were necessary. A similar process is recommended to be achieved for the South East Asian region.

Only a minority of countries have quality assurance systems based on external evaluation, and most of these use only general criteria for higher education. The WHO/WFME guidelines on accreditation in basic medical education, the first practical result of the World Health Organization (WHO)/World Federation for Medical Education (WFME) strategic partnership to improve medical education, recommend establishment of the effective. independent and transparent accreditation systems based on criteria specific to medical education.

Promotion of national accreditation systems will influence future international recognition of medical education. Information about accreditation status or other quality assurance mechanisms will be an essential component of the future Global Directories of Health Professions Education Institutions (GDHPEI) which will be a foundation for international "metarecognition" of institutions and programs ("accrediting the accreditors").

WFME welcomes the SEARAME JOURNAL

On the occasion of this inaugural issue, it is a great honour and pleasure, on behalf of the World Federation for Medical Education (WFME), to welcome the SEARAME journal among international journals concerned with medical education. The new journal will cover the interests of medical educators and other partners in the South East Asian region, an area comprising 11 countries, a total population of more than 1.6 thousand millions and more than 770,000 physicians.

The new journal appears at a time when international collaboration in higher education, including education and training of medical doctors at all levels, is becoming of highest importance, and the journal could be an essential instrument in exchange of scientific results and ideas related to medical education.

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Need for standards in medical education

The increasing internationalisation of the medical profession raises the question of safeguarding the practice of medicine and the use of the medical workforce.

Within the framework of globalisation and cross-border education, we have observed pronounced migration of medical doctors. As a consequence of this development, commercialisation and privatisation and even a for-profit approach of education providers have become realities. Medical education thus follows the conditions of other parts of higher education, becoming a trade commodity with the risk of compromising quality. This fact has brought about renewed interest in quality assurance mechanisms, exemplified in greater concern about standard setting establishment of accreditation and systems, and a number of international organisations and agencies are now working with these issues.

The need to define global standards in medical education arises from the implications of this globalisation process, but also from an attempt to meet national problems and challenges due to institutional conservatism and insufficient management and leadership.

One paramount world-wide problem is the mushrooming of new medical schools of about 100 per year over the last 10 years. development This has serious consequences in many new medical to schools due unclear mission educational insufficient statements, resources, lack of clinical training settings, and limited research attainment. The lack of accreditation procedures or other quality assurance mechanisms in many countries adds to the disguiet.

The WFME global standards programme

The WFME launched its ambitious programme on international standards in medical education in a WFME executive council position paper published in 1998 (WFME, 1998).

The working process consisted of three international task forces with all together 76 experts representing all five continents.

Members of the Task Forces were selected on the basis of their expertise.

The trilogy of global standards for quality improvement in medical education. covering basic medical education (BME), postgraduate medical education (PME) and continuing professional development (CPD) of medical doctors and published in 2003 (WFME, 2003) was the essential background material for the 2003 WFME world conference in medical education entitled: Global standards in medical education for better health care. The consensus conference resulted in worldwide on the standards programme (van Niekerk, 2003; van Niekerk et al., 2003) and gave WFME a renewed mandate. The implementation process has been ongoing since 2001, comprising pilot studies, translation (the BME Standards have been translated into more than 20 languages), basis for self-evaluation and external reviews of educational institutions and incorporation in national standards and accreditation systems around the world. More than 250 medical schools have used the standards directly and more than 60 countries use the WFME standards as a reference in national standard setting.

In defining global standards, dissimilarities between regions and countries regarding the basic conditions and management of medical education must be taken into consideration. The WFME task forces also discussed the "pros" and "cons" of standard setting. Among the advantages were incentive enumerated for improvement, basis for national formulation evaluation, of curricular essentials (core), opportunity for education research, facilitation of reforms, instrument for funding, facilitation of exchange (students/teachers/programmes) and foundation for accreditation. On the other hand, reservations were also expressed, the most important ones being interference with autonomy, focus on minimum requirements, risk of conformity, sense of control, lack of common relevance, disregard of local differences, equation of "global" and "western" and the risk of increasing brain drain. Balancing these views, the task forces came to the conclusion that time was ripe for common global standards for medical education to be explored.

Specifying global standards in any restricted sense could exert insufficient impact, and indeed such standards have the potential to lower the quality of medical education in some places. Thus, a lever for change and reform had essentially to be incorporated. This was the background for the concept of the WFME Standards to be framed to specify attainment at two levels.

(a) Basic standards to be met from the outset and useful for accreditation

(b) Standards for quality development in accordance with international consensus

about best practice and essential in reform processes.

The WFME standards are formulated at the institutional and educational programme level dealing with all relevant aspects of structure and organisation of the institution, the curriculum, its content and the process of education, the learning environment, the outcome competencies and the management of education. They are structured in nine areas (each with around 35 sub-areas) for each of the three phases of medical education (Table. 1).

Table 1: WFME Trilogy of Standards: Areas

Basic medical education	Postgraduate medical education	Continuing professional development (CPD)
1. Mission and objectives	1. Mission and outcomes	1. Mission and outcomes
2. Educational program	2. Training process	2. Learning methods
3. Assessment of students	3. Assessment of trainees	3. Planning and documentation
4. Students	4. Trainees	4. The Individual doctor
5. Academic staff/faculty	5. Staffing	5. CPD providers
6. Educational resources	6. Training settings and educational resources	6. Educational context and resources
7. Program evaluation	7. Evaluation of training process	7. Evaluation of methods and competencies
8. Governance and administration	8. Governance and administration	8. organization
9. Continuous renewal	9. Continuous renewal	9. Continuous renewal

Adaptation to Regional requirements

A European task force under the thematic network MEDINE, sponsored by the European Union, recently came to the conclusion that there is presently no need for a separate set of European standards in medical education. The increasing collaboration between countries, а spectrum of diversity of medical education comparable to other regions of the world, the regional perspectives in a broader global context and type of standards needed in medical education, all led to rejection of a concept of separate standards for Europe as an intermediary level between global and national standards in the region.

The only thing needed would be to add regional specifications for the WFME global standards. Elements of such specifications were the changing of division lines between basic standards or minimum requirements on one site, and standards for quality development on the other site. Supplements necessitated by the special European conditions as consequence of e.g. the EU directives on medical education or determined by commitment to the European higher education area, including the so- called Bologna process or other initiatives, were also added.

Based on this work, European specifications for the WFME global standards for quality Improvement of medical education were recently published (WFME, 2007) and are thought to be usable as a template for national standards in the region.

Obviously, a similar argumentation could be utilised in the South East Asian region, and I would encourage the SEARAME to take responsibility for exploring the relevance of a process of adaptation of the global standards to the needs of this Region. The examination recently conducted with European spectacles has demonstrated that the WFME standards, although now being more than 5 years old, do not need a revision at the moment.

Use of standards and the concept of accreditation

The primary intention of WFME was to provide a new framework against which

medical schools and other educational institutions and providers could measure themselves in institutional self-evaluation and self-improvement processes. Such procedures should be further developed by inclusion of evaluation and counselling from external peer review committees.

However, from the beginning, it was also stated that global standards could be used as a template for national and regional standards with the necessary specifications as mentioned above, to be used as criteria for agencies dealing with recognition and accreditation of medical schools and other educational institutions and their programmes.

assurance and accreditation Quality systems for higher education based on external review are presently adopted in somewhat more than 70 countries. The existing systems vary from country to country and sometimes even within countries. For example, some countries only have one system for all higher whereas education, others use а combination of evaluation based on general higher education criteria and profession-specific education criteria. A new problem is that most systems only cover national providers leaving crossborder education providers outside any control.

Recommendations for proper accreditation systems can be found in the WHO/WFME guidelines for accreditation in basic education, published medical in 2005(WHO & WFME, 2005) as a result of an international task force with broad representation from all regions. This was the first practical result of the 2004 strategic partnership between the World Health Organization (WHO) and the WFME to improve medical education (WHO & WFME, 2004). Another result of the WHO/WFME task force was the recommendation, that accreditation should foremost be considered a national responsibility, the exemption beina countries with only one or a few medical schools, entailing difficulties regarding the independence and externality of experts. Such conditions would require affiliation with an accreditation system in a neighbouring country or establishment of regional or sub-regional accreditation systems.

The WHO/WFME guidelines are formulated as flexible recommendations and cover fundamental requirements, the framework, the organisational legal structure, the standards or criteria to be used, the process and types of decision, the question of public announcement and comments on the benefits of using accreditation. Accreditation systems must be trustworthy and recognised by all, i.e. medical schools. students. the the profession, the health care system and the public. Trust must be based on the academic competence, efficiency and fairness of the system and the system must possess a high degree of transparency.

Within the framework of the WHO/WFME strategic partnership, WFME recently formulated a programme for promotion of accreditation (WFME, 2005). Essential in this development was the definition of a WFME advisor function by an international task force (WFME, 2005).

International recognition of medical education programmes

International recognition of medical education programmes will be beneficial to medical students, medical teachers, medical schools/colleges and health care authorities, at local, national and international levels, and will safeguard the interests of the public.

Further debate is needed on how to achieve reliable and valid international recognition of medical education institutions and programmes. In some parts of the world, accreditation of education is still not an accepted procedure and other means of quality assurance is used, e.g. central evaluation of programmes without institutional selfevaluation or site visits. Quality issues are also controlled by selection procedures, entrance examinations, centrally regulated curricula, self-evaluation and inspections organised by the institution itself, use of external examiners and national examinations before licensure.

In conclusion, apart from quality assurance of medical education through national accreditation other mechanisms for international recognition of medical education programmes are needed. Over the last years, WHO has considered the future of the World Directory of Medical Schools (WHO, 2003) and has now decided that new Global Directories Health Professions Education for Institutions (GDHPEI) should be developed. One objective is to establish and strengthen national accreditation and to increase the amount of information and about institutions programmes. including number of admissions and graduates, attrition rate, ownership. management and funding sources, and, most important, to add quality related information, e.g. about accreditation status (operating agency, the criteria used, type of procedure, etc) or other quality assurance mechanisms

In August 2007, an agreement was signed between WHO and the University of Copenhagen in Denmark, which implies that the responsibility for developing and running this database will be taken over by the University of Copenhagen with the assistance of the WFME.

The plan described will automatically lead to a system of meta-recognition of accredited medical schools. The approach "accrediting the accreditors" of will stimulate establishment of national accreditation systems, respect the work already being done by existing reliable accreditation agencies, and avoid unnecessary bureaucracy.

References

Van Niekerk, JP de V. (2003) "WFME global standards receive ringing endorsement", Medical Education, 37, pp 585-6.

Van Niekerk, JP de V, Christensen, L., Karle, H., Lindgren, S., & Nystrup, J. (2003) "WFME global standards in medical education: status and perspectives following the WFME World Conference". Medical Education, 37, pp 1050-4.

World Federation for Medical Education (1998)-Executive Council, "International standards in medical education: assessment and accreditation of medical schools' educational programmes. A WFME position paper". Medical Education, 32, pp 549-58.

World Federation for Medical Education (2003) Basic medical education. WFME global standards for Quality Improvement. Copenhagen, viewed 5 September 2007, http://www.wfme.org.

World Federation for Medical Education (2003) Postgraduate medical education. WFME global standards for quality improvement. Copenhagen, viewed 5 September 2007, <u>http://www.wfme.org</u>. World Federation for Medical Education (2003) Continuing professional development (CPD) of medical doctors. WFME global standards for quality improvement. Copenhagen, viewed 5 September 2007, <u>http://www.wfme.org</u>.

World Federation for Medical Education (2005) Promotion of Accreditation of Basic Medical Education. A Programme within the Framework of the WHO/WFME Strategic Partnership to Improve Medical Education, viewed 5 September 2007, http://www.wfme.org.

World Federation for Medical Education (2005) Manual for WFME Advisors, University of Copenhagen, Copenhagen.

World Federation for Medical Education(2007) MEDINE. The Thematic Network in Medicine in Europe, WFME Global Standards for Quality Improvement in Medical Education – European Specifications. WFME Office. University of Copenhagen, Denmark, viewed 5 September 2007, <u>http://www.wfme.org</u>.

World Health Organization (2003) World Directory of Medical Schools, Geneva, viewed 5 September 2007, http://www.who.int/hrh/wdms/en. http://www.wfm.org.

World Health Organization (WHO) and the World Federation for Medical Education (WFME) (2004) WHO/WFME Strategic Partnership to Improve Medical Education, viewed 5 September 2007, http://www.who.int/hrh/links/partnership/en/ and http://www.wfme.org.

World Health Organization (WHO) and the World Federation for Medical Education (WFME) (2005) "WHO-WFME Guidelines for Accreditation of Basic Medical Education", viewed 5 September 2007.

Role of Medical Education in patient safety

¹Somchai Peerapakorn, ² P. T. Jayawickramarajah

This year (2007) marks the fifth year after the World Health Assembly (WHA) adopted WHA Resolution 55.18(WHO, 2002) on patient safety during its fifty-fifth session in May 2002. The resolution urged WHO member states to pay the closest possible attention to the problem of patient safety and to establish and strengthen science-based systems necessary for improving patient safety and the quality of healthcare. The incidence of adverse events is a challenge to quality of care, a significant avoidable cause of human suffering, and a high toll in financial loss and opportunity cost to health services. enhancement Significant of health systems' performance can be achieved in WHO member states by preventing adverse events in particular, and improving patient safety and health care quality in general (WHO, 2002).

The World Alliance for Patient Safety was launched in October 2004 to facilitate the development of patient safety policy and practice in all WHO member states and to act as a major force for improvement. The Alliance is chaired by Sir Liam Donaldson, chief medical officer of the United Kingdom with WHO as its secretariat. The Alliance aims to fulfill the requirements of WHA Resolution 55.18 through international leadership and by creating an over-arching strategy, action programmes and a coalition of nations, stakeholders and individuals to transform the safety of healthcare worldwide(WHO, 2006).

In October 2005, the Alliance launched the first Global Patient Safety Challenge with the theme 'Clean Care is Safer Care', to bring together the WHO Guidelines on hand hygiene in healthcare with ongoing work on blood safety, injection and immunization safety, safer clinical practices, and safe water, sanitation and healthcare waste management. It emphasizes that hand hygiene is the primary measure to reduce healthcareassociated infection, which is a major area of concern in patient safety, and the spread of antimicrobial resistance.

Among other activities to address patient safety, it is noteworthy that by end of June 2007, 44 countries, including Bangladesh, Bhutan, India and Thailand from the WHO South East Asian (SEA) region, have signed the pledge to address healthcareassociated infections. Additionally, the first regional patient safety workshop on "Clean Care is Safer Care" was also organized successfully to share experiences among SEA countries during 20-22 June 2007 in Bangkok, Thailand.

In a recent attempt to draw the scope of the problem in member countries of WHO-SEA Region where lapses in patient safety are yet to be documented, Mugrditchian and Khanum (2006) showed that Thai and Indonesian situations are similar to those in industrialized nations where it has been estimated that 10% of hospitalized patients suffer an adverse event and 5-10% acquire a healthcare associated infection. They cautioned that the Thai and Indonesian findings should not be used as national estimates or extrapolated to other countries in the region. However, the incidence of adverse events is likely to be significantly higher in hospitals and in countries where services and accreditation programmes are less well developed. They showed evidences that when compared to industrialized countries, the risk of acquiring a healthcare associated infection is estimated to be 5-20 times higher in developing countries and

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neonatal infections are 3–20 times (Mugrditchian & Khanum, 2006).

Sir Liam Donaldson (Donaldson, 2005) once wrote "The biggest challenge for patient safety is not to place blame or to punish, but to prevent errors-both human systemic-from occurring. and That requires both greater transparencies in and healthcare systems greater willingness on the part of health professionals to confront our failings. To err, after all, is human. But to cover up is unforgivable, and to fail to learn is simply inexcusable. We all make mistakes, but it is our duty to learn from them and find ways to make sure they never again cause harm." His statement clearly calls on all health professionals, including physicians, that they should be willing and have ability to learn how to prevent errors and achieve improved patient safety. Along this line and regarding doctors, medical education needs to be taken into account.

In recent years some medical educators (Flanagan et al., 2004; Singh et al., 2005) have explored and noted that patient safety is fundamental to healthcare professional practice, is a common goal for healthcare providers, and transcends all competencies desired in doctors. However, patient safety issues are not a priority in undergraduate curricula and receive only scant attention in most residency curricula. In the USA, safety is a subject that transcends the Accreditation Council for Graduate Medical Education's 6 core competencies. The current trend of emphasis on training and assessment of professionalism in health profession education, professional continuing development and recertification of physicians is aimed to promote patient safety as an important component of quality of care.

To improve patient safety and quality of healthcare delivery through the education and training of doctors, various promising efforts have been tried. One group used Patient Safety as a focus to motivate practitioners and found that Crisis Resource Management courses adapted from aviation to healthcare demonstrate the value of simulation in bridging the gap between 'knowing' and 'doing' and keeping the focus on patient safety(Flanagan *et al.*, 2004). The other group designed a new patient safety residency curriculum in collaboration with the schools of nursing and pharmacy to address the US's required core competencies of doctors and at the same time to establish a culture of safety for sustainable improvement in health care through integration of safety into residents' daily activities (Singh *et al.*, 2005).

Based upon emerging evidence on patient safety, we trust that it is only a matter of time for medical educators in our region to identify better ways to train medical students and educate doctors so that they can serve as role models in the new culture for patient safety in our specific settings.

References

Donaldson, L. (2005). Patient Safety: "Do No Harm", in: Perspectives in Health, *The magazine of the Pan American Health Organization.* (http://www.paho.org/English/DD/PIN/Number21_last .htm accessed 9 September 2007)

Flanagan, B., Nestel, D. & Joseph, M. (2004) Making patient safety the focus: Crisis Resource Management in the undergraduate curriculum, *Medical Education*, 38 (1), pp 56–66.

Mugrditchian, D.S. & Khanum, S. (2006) Placing patient safety at the heart of quality in health care in south-east Asia, *International Hospital Federation Reference Book*

(<u>http://www.ihf-</u>publications.org/html/images/pdfs_ ref2/21-24.pdf accessed 9 September 2007)

Singh, R., Naughton, B., Taylor, J.S., Marlon R Koenigsberg, Anderson, D.R., McCausland, L.L., Wahler, R.G., Robinson, A. & Singh, G. (2005) A comprehensive collaborative patient safety residency curriculum to address the ACGME core competencies. *Medical Education*, 39 (12), pp 1195– 204.

WHO (2002) Resolution WHA55.18. Quality of care: patient safety, Fifty-fifth World Health Assembly, 13-18 May 2002. Geneva, World Health Organization (*http://ftp.who.int/gb/ebwha/pdf_files/WHA55/ewha55* 18.pdf accessed 9 September 2007).

WHO (2006) World Alliance for Patient Safety, Forward Programme 2006–2007, About the World Alliance for Patient Safety, preface. (http://www.who.int/patientsafety/information_centre/ WHO_EIP_HDS_PSP_2006.1.pdf accessed 9 September 2007)

Evaluation of a Masters programme in medical education

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Introduction

There is increasing demand for training in education for health professions' educators. Few studies, however, have focussed on the effectiveness of such training. This paper evaluates a Masters programme in medical education offered by the Centre for Medical Education, University of Dundee, Scotland, United Kingdom.

Methodology

A postal questionnaire was sent to 68 Masters graduates worldwide who graduated between 1989 and 1998 and 53 (78%) replied. The mean time from graduation to completing the questionnaire was 4.2 years. They were asked a series of questions about the impact of the Masters on various aspects of their personal and professional development, research and teaching roles.

Results

Graduates had taken on new posts and responsibilities, perceived a positive

influence on their personal and professional development, undertook new teaching roles at undergraduate and postgraduate levels and had became involved in educational research. Many reported an impact at institutional and some at national level.

Discussion

This is the first publication to show the perceived impact of a Masters qualification medical education on career in development. The study complements the findings of others on changes in teaching, but additionally found increased motivation for educational research. Teacher training can be delivered effectively through distance learning and this approach may be more efficient than providing multiple institutional individual programmes repeated many times over.

Key words: evaluation; Masters; health professions' teachers/educators; personal/professional development; teaching effectiveness.

Introduction

Medical education is becoming more sophisticated in terms of the demands it makes on the teacher, the student and the institution and teaching standards need to be assured. In the UK, the Postgraduate Medical Education and Training Board

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(PMETB) has been assigned the responsibility to establish and raise standards and quality in postgraduate medical education and training and a new PMETB quality assurance framework has been launched (PMETB 2007a and 2007b).

The media spotlight, however, regularly highlights the dissatisfaction expressed by the public with the products of health care training programmes. The basis for such a negative view stems from the inability of graduates to perform adequately within the health care system that employs them. The finger of blame is not surprisingly pointed in the direction of the teachers and teaching. Another reason for the spotlight to be directed towards training arises from the radical curriculum changes that are commonplace in medical schools (GMC, 1993 & 2003; Howe *et al.* 2004; William &

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Lau, 2004) and postgraduate training (Calman *et al.*, 1999; Donaldson, 2002). The need to facilitate rather than teach, to encourage independent, life-long learning rather than passive teacher-dependent short-term learning, and to introduce innovative and objective methods of assessment rather than traditional methods are strong reasons for the further enhancement of teaching skills.

It is no longer prudent to ignore the fact that many "doctors tend to teach as they themselves were taught" (Irby, 1996). Staff development must address the needs of institutional programmes, policies and personnel (Webb, 1996) and teacher training is high on this agenda. Hitchcock et al. (1993) reviewed the literature and resources relating to faculty development in the health professions and concluded that teaching skills were a prominent feature, a viewpoint shared by several others (Glenn & Harden, 1985; Webb, 1996; Irby, 1996; Towle, 1998). Since then other areas of focus for faculty development have emerged such as educational leadership, teaching and assessment of professionalism and clinical skills, effective assessment methods, educational evaluation and research, and best evidence medical education (Wilkes & Bligh, 1999; Steinert, 2000; Belfield et al., 2001; Goldstein et al., 2006; Gruppen et al., 2006).

There is no doubt that the job of teacher entails the wearing of many "caps" (Hesketh et al., 2001). Harden and Crosby (2000) identified 12 roles of the medical teacher: (1) lecturer, (2) clinical or practical teacher, (3) resource material creator, (4) study guide producer, (5) course organiser, (6) curriculum planner, (7) curriculum evaluator, (8) student assessor, (9) mentor, (10) learning facilitator, (11) on-the-job role model and (12) teaching role model. Effectiveness in each of these roles requires the development of kev teaching competencies.

Programmes offering qualifications in education for health care professionals are proliferating (Steinert *et al.*, 2005; Allery *et al.*, 2006; Gruppen *et al.*, 2006). Towle (1998) provides case studies exemplifying the types of training on offer. The UK government has sought to remedy the lack of teacher training in higher education

through the establishment of the Institute of Learning and Teaching in Higher Education now a part of the Higher Education Academy (HEA, 2007) the organization for all who teach in higher education. New lecturers in the UK are required to undertake training in teaching and are encouraged to become members or associate members of the Higher Education Academy. The question that has yet to be answered however, is how effective are such teacher training programmes.

The current study evaluates the Masters degree course in medical education at the Centre for Medical Education, University of Dundee. This course is part of a linked programme of study that has been specifically designed to meet the needs of in the health care staff working It allows participants to professions. progress from an introduction to medical education, through the award of a postgraduate certificate and diploma to Masters level. Participants may exit at any one of these four levels with an award that may be included in their curriculum vitae The programme relates or portfolio. practical aspects of education to the relevant underpinning educational principles and concepts. There are core topics that must be studied by all participants. The participants can select additional topics from a wide range of The course themes are: options. curriculum development, teaching and learning, assessment, research methods and special options. The final component of the Masters degree is a project documented as a dissertation that focuses on an issue directly of importance to the participant. The Dundee Masters course attracts participants from a range of health care professions at various levels of seniority from all over the world. The programme is offered via distance learning, although a few participants undertake face-to-face study in Dundee.

This evaluation was carried out to shed light on the impact of formal training in education. The research concentrated on the following questions. What are the benefits of a Masters qualification? Do Masters graduates make progress in the field of research? Do they make an impact at institutional and national level? What effect has the degree had on their teaching, in terms of Harden and Crosby's (2000) 12 roles of the teacher? The impact of the course was assessed from the perspective of the graduates. Other potential beneficiaries, for example, students and institutions, were not included for reasons of practicability.

Methods

The study population consisted of all 85 Masters students who graduated between 1989 and 1998. Specialist groups who were funded for a particular educational purpose (n=14) were excluded from this study as they had participated in evaluation elsewhere. Current addresses were found for 68 of the remaining 71 graduates. Twenty nine were from the United Kingdom and 39 from the rest of the world.

The questionnaire was pre-tested on 6 international Masters graduates. After the pre-test the question rating teacher as a role model was removed because of the difficulty of self perception of role model. The questionnaire contained 17 questions (both open and closed), of which the first five collected demographic details. Three further questions addressed the issues of personal and professional development. Graduates were requested to give information on what happened to them career-wise since completing the Masters Details of new posts and degree. responsibilities were sought. There was also a section on changes in their teaching role based on Harden and Crosby's (2000) 12 roles of the teacher. This section required participants to identify their undergraduate involvement in and postgraduate teaching before and after graduation using a five point rating scale (5 full time to 1 never), in relation to the different roles of the teacher. The remaining eight questions collected data pertaining to educational research activities and academic publications in educational areas, satisfaction with the course and achievements at institutional and national levels.

A mailed questionnaire approach was used in view of the wide geographical spread of graduates. The data were coded, entered, edited and analysed using SPSS Version 8. Wilcoxon Signed Ranks test was used to determine the significance of the difference between the scores for the teaching involvement before after the Masters. The handwritten information from open-ended questions was transcribed verbatim, and analysed by clustering, categorising and identifying themes that emerged.

Results

The questionnaire was mailed to 68 participants drawn from United Kingdom (31), Tanzania Thailand (7), (5), Zimbabwe (4), Canada (3), Kenya (3), Australia (2), and 1 each from Brazil, Colombia, Finland, Indonesia, Palestine, Latvia, New Zealand, Nigeria, Papua New Guinea, Portugal, Sudan, United Arab Emirates and Zambia. Fifty three graduates (78%) responded to the questionnaire. Of these, 30 were doctors and 23 came from other health care professions: health profession education (8); nursing (4); physiotherapy (3); environment health (3); radiography (2); and one each from occupational therapy, pharmacy, and chiropractice. Twenty nine of the 39 overseas graduates representing 19 countries responded and 24 of the 29 UK graduates replied. Thirty four (64%) of the respondents were distance learners and 19 had studied face to face. Respondents completed the questionnaire between 1 and 10 years after gaining the qualification (mean=4.2 years). Thirty four respondents (64%) had graduated during the period 1994-98 and 19 between 1989-93. There were no significant differences between the 53 respondents and 15 non respondents in respect of country of residence (p=0.4), study mode (p=0.2), or profession (p=0.5).

All but one of the respondents reported that their career had been influenced in some way by the Masters qualification. Fifty one percent had taken on new posts after graduating, while 38% had taken on new responsibilities within the same position. The new posts acquired were: director/programme manager/department head (15); consultant (5); member of educational committee (5); senior lecturer/lecturer (4); professor of medical education (1) and journal editor (1). Respondents were able to indicate more than one newly acquired post.

Graduates were asked to describe how the Masters award had influenced their career. The qualification had instilled

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confidence in their abilities within the specifically in relation to teaching, research supervision and curriculum development work. It also gave them credibility and earned them the respect of their peers. In terms of personal characteristics, flexibility, understanding and tolerance were commonly mentioned as being enhanced. Table 1 shows the five general aspects most commonly mentioned.

Table 1. To Masters	op five areas in which the s award had a positive influence
1	Professional development
2	Self confidence
3	Increased knowledge base
4	Research capabilities
5	Curriculum development

The gualification had provided а substantial knowledge base and awareness of a vast field of education outside medicine. Some respondents described how they were being given more responsibility for 'teacher training' and had become more innovative and better able to carry out research in medical education. Table 2 shows the mean ratings for involvement in undergraduate teaching before and after graduation.

broad area of education and more Statistically significant differences were found in the following roles:

Learning facilitator (p<0.01), curriculum planner (p<0.01), mentor (p<0.05) and curriculum evaluator (p<0.05). Teaching at postgraduate level increased after obtaining the Masters qualification.

Table 3 shows the mean scores statistically significant differences were found in the following roles: lecturer (p<0.000), learning facilitator (p<0.01), mentor (p<0.01), student assessor (p<0.05), curriculum evaluator (p<0.05), curriculum planner (p<0.05), course organiser (p<0.05), study guide producer (p<0.05) and resource material creator (p<0.05).

responses to the open-ended The how the Masters questions described award influenced the ability of respondents to teach and better facilitate learning; adopt a more learner-centred and focused approach to teaching; and give more autonomy to students to plan their own learning. They were appreciative of the confidence they had developed and the theory they had acquired to support the methods used. They were able to use new assessment methods in their own context. The qualification provided skills such as the ability to co-ordinate the undergraduate medical course assessment committee.

Table 2. Mean scores :	for involvement in	undergraduate	teaching before	and after graduation
				<u> </u>

Teaching role		Mean	scores
	Number of	Before	After
	graduates		
Clinical / practical teacher	38	2.68	2.74
Lecturer	40	2.75	2.8
Learning facilitator	33	2.24	3.03 [†]
Mentor	31	1.94	2.39*
Student assessor	33	2.7	2.91
Curriculum evaluator	36	1.94	2.75*
Curriculum planner	35	2.11	3.0 [†]
Course organiser	33	2.03	2.61
Study guide producer	33	1.58	1.91
Resource material creator	34	1.94	2.26
Student selector	37	2.08	2.38
$\frac{1}{10} < 0.01$			

'p<0.01 p<0.05

Teaching role	Mean scores			
	Number of graduates	Before	After	
Clinical / practical teacher	32	2.31	2.63	
Lecturer	33	1.97	2.64 [‡]	
Learning facilitator	32	2.1	2.53 [†]	
Mentor	32	1.78	2.25 [†]	
Student assessor	30	2.07	2.43*	
Curriculum evaluator	29	1.79	2.24*	
Curriculum planner	30	1.93	2.43*	
Course organiser	32	2.06	2.38*	
Study guide producer	32	1.66	1.91*	
Resource material creator	31	1.87	2.16*	
Student selector	30	1.87	2.23	

Table 3. Mean scores for involvement in postgraduate teaching before and after graduation

[‡]<0.000

[†]<0.01

*p<0.05

Twenty eight (55%) of the 51 graduates who responded to this question had carried out educational research since the award of the degree. There was no statistically significant difference between the numbers in relation to the UK and overseas graduates (p=0.2). Table 4 shows the top five research topics ranked in terms of frequency of reporting.

Among the 28, who had carried out educational research, 15 graduates reported having published in peerreviewed journals, 9 had published abstracts and presented posters and 9 had given papers at conferences or workshops.

Thirty five respondents (66%) claimed to have made an impact at institutional level and 23 (43%) at national level.

Activities mentioned at the institutional level were development of new courses,

models for curriculum design, and teaching workshops. Respondents were being consulted about assessment, evaluation, development of courses, and participating in review of medical curricula. They were helping to create new qualifications. They provided leadership in educational activities such as assessment. teaching/learning, clinical skills examination in postgraduate courses and orienting teachers at training institutes to learner-centred methods. They had initiated faculty development activities in areas of clinical teaching, evaluation, basic research and medical ethics.

At national level the respondents identified having introduced a national system of quality assurance; influencing review of curricula in training institutes; and participating in curriculum design and training activities within their own countries.

Table 4.	Research	topics	ranked	bv fred	uencv	of re	eportina	(n=28)
Tuble 4.	1 COCUI OII	topioo	runnou	by noq	uonoy	0110	porung	(11-20)

	Topic Number
Education and training in general	22
Evaluation and quality assurance	16
Methods of teaching and learning	8
Student assessment	6
Needs assessment	3

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
The course met my needs (n=51)	43%	55%	2%	-	-
I am now able to cope better with the educational aspects of my job (n=52)	59%	33%	6%	2%	-
I would recommend the course to my colleagues (n=51)	59%	33%	4%	4%	-

Table 5 illustrates the level of satisfaction with the Masters course. The vast majority of graduates felt the programme had enhanced their job skills and fully met their needs and 92% of the respondents would recommend the course to colleagues.

The higher degree was felt necessary by the respondents to develop confidence; learn more about educational theory; and have better opportunity to get a new post. These needs were met.

In an open-ended question seven respondents commented on distance learning, highlighting the need to be self – directed; importance of supervision; learner support; and the usefulness of a second mentor close to home. Several appreciated the high quality supervision provided and the easy access and the approachability of all staff at the Centre for Medical Education.

Discussion

The extent to which the course seemed to contribute to career development in the form of obtaining promotion is interesting. It is, however, important to point out at the onset that the findings relate to "self perceived" benefits and promotion may have occurred in the absence of the Masters gualification. Our study is retrospective and suffers from the drawbacks of this form of research. Steinert et al. (2006) in a systematic review of 53 faculty development initiatives to improve teaching effectiveness in medical education point out that questionnaires have been the most popular method of data collection and a majority of the programmes rely on self reported rating of teaching skills.

Much has been written about the need for relevant staff development programmes (Nathan & Suddaby, 1999; Rowland, 1999; Steinert, 2000; Gruppen *et al.*, 2006). The Dundee Masters course seems to provide a major input into not only increased knowledge about education issues such as curriculum development, but also into areas such as professional development and self-confidence.

The increase in the involvement in teaching was significant for the relatively new roles that are expected of teachers i.e. learning facilitator, curriculum planner, curriculum evaluator, course organiser, study guide producer, mentor and resource material creator. Steinert et al. (2006)summarise the teaching effectiveness outcomes which tend to be supported in their review of faculty development initiatives under four major areas: positive changes in attitudes towards faculty development and towards increased knowledge teaching: of educational concepts and principles and how to apply them, and various aspects of teaching (for example, specific teaching strategies, a more learner centred assessing learner needs, approach, promoting reflection); self perceived changes in teaching behaviour; and in a few studies, changes in organizational practice and student learning such as greater involvement in new educational activities and the establishment of new and improved networks of teachers.

The Masters gualification had an effect on the research output of graduates, meeting the need identified by Bliah (2000) for Masters programmes that develop research capacity in their graduates. This is encouraging, as carrying out relevant and methodologically rigorous studies is important for the continuing advancement of medical education (Davis & Ponnamperuma, 2006). The need for research skills in medical education and the future directions for research have been identified by authors who have

highlighted the variety of contributions made by research to improving the process and outcomes in medical education and as well as health care outcomes (Norman, 2002; Schuwirth & Cantillon, 2005; Tamblyn *et al.*, 2005; Steinert *et al.*, 2006).

The confidence to use their new training is reflected in the impact graduates feel they have made at both institutional and national level. Leadership in medical education is needed to enhance health care training in the future. The Masters programme appears to have contributed significantly to the professional development of health care teachers throughout the world. Often faculty will look to their own institute to develop a programme suited to their teachers needs (Allery et al., 2006) and the number of new institutional postgraduate certificate courses is burgeoning. An alternative approach would be to look at what is on offer in terms of distance learning courses. It may be both effective and efficient to enrol key staff on such courses rather than to provide educational training for health professionals through multiple individual institutional programmes.

References

Allery, L., Brigley, S., MacDonald, J. & Pugsley, L. (2006) Degrees of difference. Final report of an independent study into the masters and doctorate programmes in medical education in the United KIngdom. (Association for the Study of Medical Education, United Kingdom).

Belfield, C., Thomas, H., Bullock, A., Eynon, R. & Wall, D. (2001) Measuring effectiveness for best evidence medical education: a discussion. *Medical Teacher*, 23 (2), pp. 164-70.

Bligh, J. (2000) Developing research capacity. *Medical Education*, 34, pp. 2-3.

Calman, K.C., Temple, J.G., Naysmith, R., Cairncross, R.G. & Bennett, S.J. (1999) Reforming higher specialist training in the United Kingdom – a step along the continuum of medical education. *Medical Education*, 33, pp. 28-33.

Davis, M.H. & Ponnamperuma, G.G. (2006) Medical education research at the crossroads. *Lancet*, 367, pp. 377-8.

Donaldson, L. (2002) Unfinished business. Proposals for reforms of the senior house officer grades. A report by Sir Liam Donaldson, Chief Medical Officer for England. A paper for consultation. (Department of Health, London).

http://www.mmc.nhs.uk/download_files/Unfinished-Business.pdf (accessed 22 June 2007). General Medical Council. (1993) Tomorrow's doctors. London, GMC.

General Medical Council. (2003) Tomorrow's doctors. Recommendations on undergraduate medical education. London, GMC.

Glenn, J.M. & Harden, R.M. (1985) Academic staff development. Editorial 2. *Medical Teacher*, 7 (3/4), pp. 251-5.

Goldstein, E.A., Maestas, R.R., Fryer-Edwards, K., Wenrich, M.D., Oelschlager, A.A., Baernstein, A. & Kimball, H.R. (2006) Professionalism in medical education: an institutional challenge. *Academic Medicine*, 81 (10), pp. 871-6.

Gruppen, L.D., Simpson, D., Searle, N.S., Robins, L., Irby, D.M. & Mullan, P.B. (2006) Educational fellowship programs: common themes and overarching issues. *Academic Medicine*, 81 (11), pp. 990-4.

Harden, R.M. & Crosby, J. (2000) The good teacher is more than a lecturer – the twelve roles of the teacher. AMEE Education Guide No 20. *Medical Teacher*, 22 (4), pp. 334-47.

Hesketh, E.A., Bagnall, G., Buckley, E.G., Friedmann, M., Goodall, E., Harden, R.M., Laidlaw, J.M., Leighton-Beck, L., McKinlay, P., Newton, R. & Oughton, R. (2001) A framework for developing excellence as a clinical educator. *Medical Education*, 35, pp. 555-64.

Higher Education Academy. Background. http://www.heacademy.ac.uk/3115.htm (accessed 28 June 2007).

Hitchcock, M.A., Stritter, F.T. & Bland, C.J. (1993) Faculty development in the health profession: conclusions and recommendations. *Medical Teacher*, 14 (4), pp. 295-309.

Howe, A., Campion, P., Searle, J. & Smith, H. (2004) New perspectives - approaches to medical education at 4 new UK medical schools. BMJ, 329, pp. 327-31. Irby D.M. (1996) Models of faculty development for problem-based learning. *Advances in Health Science Education*, 1, pp. 69-81.

Nathan, J. & Suddaby, G. (1999) Introducing mandatory professional development for academic staff: a case study. *HERDSA News*, March, pp. 17-20.

Norman, G. (2002) Research in medical education three decades of progress. *BMJ*, 329, pp. 1560-2.

Postgraduate Medical Education and Training Board. http://www.pmetb.org.uk/, (accessed June 2007a).

PMETB Quality Assurance Framework. Postgraduate Medical Education and Training Board. http://www.pmetb.org.uk/fileadmin/user/QA/QAF_Co nsultation (accessed June 2007).

Rowland, S. (1999) The role of theory in a pedagogical model for lecturers in higher education. *Studies in Higher Education*, 24 (3), pp. 303-14.

Schuwirth, L. & Cantillon, P. (2005) The need for outcome measures in medical education complex educational interventions demand complex and appropriate evaluations. *BMJ*, 331, pp. 977-8.

Steinert, Y. (2000) Faculty development in the new millennium: key challenges and future directions. *Medical Teacher*, 22 (1), pp. 44-50.

Steinert, Y., Cruess, S., Cruess, R. & Snell, L. (2005) Faculty development for teaching and evaluating professionalism: from programme design to curriculum change. *Medical Education*, 39, pp. 127-136.

Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M. & Prideaux, D. (2006) A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. *Medical Teacher*, 28 (6), pp. 497-526.

Tamblyn, R., Abrahamowicz, M., Dauphinee, D., Girard, N., Bartlett, G., Grand'Maison, P. et al. (2005) Effect of a community oriented problem based learning curriculum on quality of primary care delivered by graduates: historical cohort comparison study. *BMJ*, 331, pp. 1002-8.

Towle, A. (1998) Staff development in UK medical schools. In: B. Jolly, L. Rees (Eds), *Medical Education in the Millennium*, (Oxford Press, Oxford).

Webb, G. (1996) Introduction - Understanding Staff Development. (The Society for Research into Higher Education and the Open University Press). Wilkes M., & Bligh J. (1999) Evaluating educational interventions. *BMJ*, 318 (8 May), pp. 1269-72.

Williams, G. & Lau, A. (2004) Reforms of undergraduate medical teaching in the United Kingdom: a triumph of evangelism over common sense. *BMJ*, 329, pp. 92-4.

Perceptions of academic achievers and under-achievers regarding learning environment of Melaka Manipal Medical College (Manipal campus), Manipal, India, using the DREEM Inventory

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Learning environment in any medical school is found to be important in determining students' academic success. The present study was undertaken to study the perceptions of academic achievers and under-achievers (clinical phase) of Melaka Manipal Medical College (MMMC) (Manipal campus), India, using the Dundee Ready Education Environment Measure (DREEM) Inventory. The DREEM Inventory was administered to 108 medical students in the clinical phase of the curriculum. Data analysis revealed that the overall DREEM score of the academic under-achievers was high, compared to the academic achievers. While comparing the gender-wise perceptions, the mean score for female students was found to be more in both groups.

Introduction

Learning environment in any medical school is found to be important for effective management of learning (Genn, 2001) and for modifying the curriculum (Genn & Harden, 1986). Curriculum's most manifestation significant and conceptualization is the learning educational environment. and organizational, which embraces everything that is happening in the medical school (Genn, 2001). A study of the learning environment is one of the first steps taken during curriculum change (Skilbeck, 1976). According to Boomer (1982), curriculum development in medical education would

Correspondence: Dr. Reem Rachel Abraham Department of Physiology Melaka Manipal Medical College (Manipal Campus) International Centre for Health Sciences Manipal – 576 104 Karnataka state, India Phone no: 91-820-2571201 ext-22519 Fax no: 91-820-2571905 consist of changes in the learning environment of any medical school. The World Federation for Medical Education (WFME) singles out the learning environment as one of the targets for the evaluation of medical education programs (1998). Students' perception of the learning environment is also found to influence their behaviour (Till, 2004).At Melaka Manipal Medical College (MMMC) (Manipal campus), undergraduate medical program (MBBS - Bachelor of Medicine & Bachelor of Surgery) is offered as a twinning program with Malaysia. It is offered in two phases (Phase I & Phase 2) which runs for two and a half years. Phase 1 consists of Stage 1 & Stage 2 which runs in Manipal. During Stage 1 students learn Anatomy, Physiology & Biochemistry in an integrated manner. During Stage 2 (second year), students learn Pharmacology, Microbiology, Pathology & Medicine. Forensic After successful completion of Stage 2, students undergo six months of clinical training in Manipal. Phase 2 runs at MMMC (Melaka Campus), Malaysia. The clinical phase in Manipal consists of posting of students in different clinical departments. Didactic lecture is the predominant teaching strategy adopted. About 98% of the students are from

Melaka Manipal Medical College (Manipal Campus) International Centre for Health Sciences Manipal
 Centre for Medical Education, University of Dundee, Dundee, Scotland, United Kingdom

Malaysia while the remaining is from different parts of the world. The admission system made sure that all the students getting admitted to MMMC has an average score of 3.5 in the grade point average scale in the qualifying examination. So as all the students are of similar capabilities, we are considering the students who have experienced failure in the university examinations at least once as academic under-achievers (students who have not performed up to their ability) and students who have never experienced failure as academic achievers.

Mayya & Roff. (2004) had found significant differences in the students' perceptions of learning environment between academic achievers and under-achievers. The present study was intended to find out the between association the academic achievement of the students and their perceptions of learning environment. In MMMC we have extensive support system for the academic under-achievers in the form of regular small group learning activities, mentorship programme and formative and summative assessments. Once students fail in the examination, they have to undergo intensive training for a period of six months before they can reappear. Our expectation is that this study will reveal the effectiveness of these support systems, which is intended to facilitate their (under-achievers) learning.

Inventories measuring learning environment in medical schools are widely being used in medical education research. In the present study, the Dundee Ready Environment Education Measure (DREEM) Inventory was used. DREEM was originally developed at Dundee and has been validated as a universal diagnostic inventory for assessing the whole or parts of the educational environment and to permit education of their responses to the challenges of changing mandates and missions (Roff, 1997).

DREEM is a 50 item inventory and the items are grouped under 5 subscales.

 Students perceptions of learning (SPL) – 12 items, maximum score is 48

- Students perceptions of teachers (SPT) – 11 items, maximum score 44
- Students Academic self perception (SASP) – 8 items, maximum score is 32
- Students Perceptions of atmosphere (SPA) – 12 items maximum score is 48
- Students Social Self Perceptions (SSSP) – 7 items, maximum score is 28

The present study was undertaken with the following objectives:

- 1. To compare the perceptions of academic achievers and under achievers, regarding the learning environment at MMMC
- 2. To evaluate the effectiveness of the support system for academic under-achievers by measuring the their perceptions regarding the learning environment
- 3. To compare the gender-wise perception of academic achievers and under achievers

Method

The Dundee Ready Education Environment Measure (DREEM) was administered 108 undergraduate to medical students of the same batch in the clinical phase of their curriculum after a lecture class. Prior to administration, the class was addressed regarding the purpose and process of data collection. In order to divide the sample as academic achievers and under-achievers, the students were asked to mention whether they have experienced failure or not, in their past two years of study in MMMC, in the response sheet. The students were told regarding the anonymity of the responses.

Eight students did not mention their gender in the response sheet. Therefore in effect, the completed inventory was collected from 100 students (58 males & 42 female students), out of which, 72 of them were academic achievers and 28 were academic under achievers. Each DREEM item was scored 0 to 4 with scores of 4, 3, 2, 1 and 0 assigned for strongly agree, agree, uncertain, disagree and strongly disagree respectively. Negative items were scored in the reverse manner. To pinpoint more specific strengths and weaknesses within the learning environment at MMMC, items with a mean score of 3 and above were taken as positive points and items with a mean score of 2 and below were taken as problem areas. Items with a mean score between 2 and 3 were considered as aspects of the learning environment that could be enhanced. By means of the statistical package SPSS, student's t - test was calculated and used for all the comparisons.

Results

Table 1 shows the mean DREEM domain scores for the present sample of students. It was observed that academic underachiever group of students scored relatively higher for all domains, compared to academic achievers. Among these statistically significant differences were observed only for SPL and SPT domains.

Table 2 shows the mean DREEM item scores of the two groups. Academic achievers scored a mean below 2 for 4 items (27, 42, 3, and 14). Out of the 4

items 1 item was from SASP (27), 1 item was from SPA (42) and 2 items were from SSSP (3, 14). None of the items had a score above 3. The academic under achievers scored a mean below 2 for 6 items and above 3 for only one item (10). Out of the 6 items (5, 27, 23, 42, 14, 28), 2 items were from (SASP) (5, 27), 2 items from SPA (23, 42) and 2 items from SSSP (14, 28).

Table 3 shows the items for which significant difference was observed between the two groups of students. Out of the two items one (9) belonged to SPL and the other one (48) to SPT.

Table 4 shows the items for which significant difference was observed between male and female academic under-achievers. Out of the 5 items, 3 items were from SPL (21, 38, 47) 1 item was from SPT (8) and 1 item was from SSP (14). There were no items from SASP and SPA which showed significant differences between the two groups.

Table 5 depicts the items showing significant differences between male and female academic achievers. Out of the 5 items, 1 item was from SPL (38) 2 items were from SPT (18, 37) and 2 items from SSSP (15, 46). There were no items from SASP and SPA which showed significant differences between the two groups.

	Table	1: Mean	(SD)	DREEM	domain	scores	for ac	ademic	achievers	and	under	achievers
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Domains	Academic achievers	Academic under- achievers	P value
SPL	2.24	2.40	0.015
SPT	2.20	2.41	0.006
SASP	2.39	2.59	0.144
SPA	2.22	2.30	0.151
SSSP	2.11	2.13	0.963

Table 2: Mean	(SD) DREEM ite	m scores for	r academic	achievers	and non	achievers in
clinical batch						

Domain	ltem	Academic	Academic
Domain		achievers	under-
			achievers
SPL	 1.1 am encouraged to participate in teaching sessions 	2.35(0.72)	2.42 (0.87)
	7. The teaching is often stimulating	2.09 (0.85)	2.42 (0.87)
	13. The teaching is registrar centred	2.15 (1.03)	2.10 (0.99)
	16. The teaching helps to develop my confidence	2.60 (0.95)	2.57 (0.86)
	20. The teaching is well focused	2.57 (0.74)	2.67 (0.77)
	The teaching helps to develop my confidence	2.17 (0.91)	2.50 (1.00)
	24. The teaching time is put to good use	2.21 (1.07)	2.39 (1.06)
	25. The teaching overemphasizes factual learning	1.58 (0.96)	1.64 (1.12)
	 I am clear about the learning objectives of the course 	2.57 (0.97)	2.60 (1.03)
	The teaching encourages me to be an active learner	2.28 (0.90)	2.39 (0.95)
	47. Long term learning is emphasized over short term learning	2.47 (0.98)	2.71 (0.85)
	48. The teaching is too teacher centred	1.73 (0.97)	2.42 (0.92)
SPT	2. The course organizers are knowledgable	3.01 (0.53)	2.85 (0.80)
	6. The course organizers espouse a patient centred approach to consulting	2.10 (1.00)	2.32 (1.02)
	8. The course organizers ridicule their registrars	1.78 (1.00)	2.17 (0.77)
	9. The course organizers are authoritarian	1.45 (1.01)	1.92 (0.85)
	18. The course organizers appear to have effective	2.53 (0.98)	2.64 (0.86)
	communication skills with patients		
	29. The course organizers are good at providing feedback to	2.02 (0.91)	2.42 (0.99)
	registrars		
	32. The course organizers provide constructive criticism here	2.21 (1.01)	2.42 (0.95)
	37. The course organizers give clear examples	2.69 (0.86)	2.71 (0.85)
	39. The course organizers get angry in teaching sessions	1.42 (1.14)	1.78 (1.03)
	40. The course organizers are well prepared for their teaching	2.84 (0.84)	2.92 (0.94)
	sessions		
	49. The registrars irritate the course organizers	2.15 (0.98)	2.25 (1.14)
SASP	5. Learning strategies which worked for me before continue to	2.26 (0.91)	1.96 (0.79)
	10. Lam confident about passing this year	2 00 (0 07)	3 71 (6 02)
	22 I feel I am being well prepared for my profession	2.30 (0.37)	2 46 (1 10)
	26 Last years work has been a good preparation for this years	2.42 (0.04)	2 78 (0 91)
	work	(
	27. I am able to memorize all I need	1.69 (1.07)	1.57 (0.99)
	 I have learned a lot about empathy in my profession 	2.52 (0.86)	2.71 (1.01)
	My problem solving skills are being well developed here	2.27 (0.88)	2.53 (0.79)
	45. Much of what I have to learn seems relevant to a career in	2.64 (0.94)	3.00 (0.81)
	healthcare		0 0 - (0 - 0)
SPA	11. The atmosphere is relaxed during consultation teaching	2.19 (1.00)	2.35 (0.78)
	12. The course is well time tabled	2.31 (0.99)	2.67 (1.05)
	17. Cheating is a problem in this course	2.39 (1.27)	2.57 (1.06)
	20. The almosphere is relaxed during reclures	2.24 (0.93)	1.90 (1.03)
	30. There are opportunities for the to develop interpersonal skills	2.30 (0.03)	2.30 (0.90)
	34. The atmosphere is relayed during seminars/tutorials	2.20 (0.07)	2.39 (0.93)
	54. The almosphere is relaxed during seminars/tutorials	2.13 (1.00)	2.55 (0.51)
	35. I find the experience disappointing	2.43 (0.99)	2.53 (0.88)
	36. I am able to concentrate well	2.34 (0.94)	2.21 (0.95)
	42. The enjoyment outweighs the stress of studying medicine	1.58 (0.98)	1.71 (1.08)
	43. The atmosphere motivated me as a learner	2.39 (0.95)	2.28 (1.15)
	50. I feel able to ask the questions I want	1.90 (1.20)	2.14 (1.17)
SSSP	3. There is a good support system for registrars who get	1.84 (0.81)	2.14 (0.75)
	suesseu 4 Lam too tired to enjoy this course	1 42 (1 15)	1 85 (1 14)
	14 Lam rarely bored on this course	1 64 (1 07)	1 64 (1 06)
	15 I have good friends in this course	2 82 (1 17)	2 82 (1 02)
	19. My social life is good	2.56 (0.97)	2.21 (1.10)
	28. I seldom feel lonely	2.06 (1.27)	1.64 (1.02)
	46. My accommodation is pleasant	2.46 (1.32)	2.64 (0.95)

Table 3: Mean (SD) DREEM items showing significant differences between academic achievers and academic under-achievers

Domains	Items	Mean (SD)		p-value
		Academic under achievers	Academic achievers	
SPT	9. The course organizers are authoritarian	1.92 (0.85)	1.45 (1.01)	0.03
SPL	48. The teaching is too teacher centred	1.73 (0.97)	2.42 (0.92)	0.002

Table4: Mean (SD) DREEM items showing significant differences between male and female academic under-achievers in the clinical batch

Items	Males	Females
8. The course organizers ridicule their registrars	2.31(0.67)	1.64 (1.08)
14. I am rarely bored on this course	1.57 (1.12)	2.00 (0.87)
21. The teaching helps to develop my confidence	2.31 (1.10)	2.78 (0.69)
38. I am clear about the learning objectives of the course	2.57 (1.12)	2.85 (0.66)
47. Long term learning is emphasized over short term learning	2.47 (1.12)	2.64 (0.92)

Table 5: Mean (SD) DREEM items showing significant differences between male and female academic achievers in the clinical batch

Items	Males	Females
15. I have good friends in this course	2.63 (1.38)	3.03 (0.82)
18. The course organizers appear to have effective communication skills with patients	2.36 (1.07)	2.75 (0.78)
37. The course organizers give clear examples	2.57 (0.91)	2.93 (0.70)
38. I am clear about the learning objectives of the course	2.44 (1.08)	2.82 (0.80)
46. My accommodation is pleasant	2.23 (1.42)	2.82 (1.13)

Discussion

The overall DREEM score for our medical school was found to be 114 /200 as perceived by the above sample of students. The overall score given by the academic achievers and under-achievers were found to be 112/200 and 119/200 respectively. Taking the above score into consideration, students' perceptions regarding the medical school was found to be more positive. The overall DREEM score for another Indian medical school was reported as 107.44/200 (Mayya, 2004). For the same medical school, the score given by academic achievers and under-achievers were found to be 108.95/200 and 101.65/200 respectively (Mayya, 2004). The DREEM global scores for medical schools in Sri Lanka (Jiffry et al., 2005), Nepal and Nigeria (Roff et al., 2001) were reported as 108/200, 130/200 118/200 respectively. and While considering the DREEM domain scores for the present sample of students, academic under-achievers were found to have scored higher for all the domains. Out of the 6 items for which the academic underachievers scored a mean of less than 2, 3 items were scored less than 2 by the academic achievers also (27, 42 and 14). The academic under-achievers perceived more positively about the support system than the academic achievers.

It was observed that academic underachievers had significantly higher scores than academic achievers in the domains SPL and SPT. This indicates that our academic support systems were perceived in the right manner by the academic under-achievers.

Females in the academic under-achiever group, when compared to their male counterparts, felt that the teaching helps to develop their confidence, the learning objectives were clear, and that long-term learning is emphasized over short-term learning. They also felt that they are rarely bored in the course. The male students felt to a greater extent that the teachers ridicule them. In the academic achiever group, female students felt to a greater extent that they had good friends and their accommodation is pleasant. They also felt teachers had effective that the communication skills with the patients and

that they give clear examples while teaching.

The present study reports different perceptions of two groups of students in the same academic environment. Findings from the study are quite contradictory to those reported by other researchers (Mayya & Roff, 2004) wherein, the overall score was found to be more for academic achievers. The academic under-achievers scoring higher than academic achievers could be due of the extensive support system for the failed candidates. Compared to other medical schools in India, MMMC is unique in that our students are foreign nationals. Their perceptions could be influenced by their educational background and the living standards in their native country.

Conclusion

The perceptions of academic underachievers were found to be significantly different from those of academic achievers. The present study revealed problematic areas in the medical school environment wherein remedial measures are to be taken.

References

Boomer, G. (Ed.) (1982) *Negotiating the Curriculum* (Sydney, Ashton Scholastic).

Genn, J.M. (2001) AMEE Medical Education Guide No 23 (Part 1): Curriculum environment, climate, quality and change in medical education-a unifying perspective, *Medical Teacher*, 23(4), pp. 337-44.

Genn, J.M. & Harden, R.M. (1986) What is medical education here really like? Suggestions for action research studies of climates of medical education environments, *Medical Teacher*, 8(2), pp. 111-24.

Jiffry, M.T.M., McAleer, S., Fernando S. & Marasinghe, R.B. (2005) Using the DREEM questionnaire to gather baseline information on an evolving medical school in Sri Lanka, *Medical Teacher*, 27(4), pp. 348-52.

Mayya, S.S. & Roff, S. (2004) Students' perceptions of educational environment: A comparison of academic achievers and under-achievers of Kasturba Medical College, India, *Education for Health*, 17(3), pp. 280-91.

Roff, S., McAleer, S., Ifere,O.S. & Bhattacharya, S. (2001) A global diagnostic tool for measuring educational environment: comparing Nigeria and Nepal, *Medical Teacher*, 23(4), pp. 377-81. Roff, S., McAleer, S., Harden, R., Al-Qahtani, M., Ahmed, A., Deza, H., Groenen, G. & Primparyon, P. (1997) Development and validation of the Dundee Ready Education Environment Measure (DREEM), *Medical Teacher*, 19(4), pp. 295-9.

Skilbeck, M. (1976) School-based curriculum development, reprinted in Prescott, W. & Bolam, R. Supporting Curriculum Development, pp.90-103 (Milton Keynes, Open University Press). Till, H. (2004) Identifying the perceived weaknesses of a new curriculum by means of the Dundee Ready Education Environment Measure (DREEM) Inventory, *Medical Teacher*, 26(1), pp. 39-45.

World Federation for Medical Education (1998) International Standards in medical education: assessment and accreditation of medical schools' educational programmes: A WFME position paper, *Medical Education*, 32(5), pp.549-58

Graduates' perceptions regarding their final year training

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Introduction

Educational experiences of graduates' as primary consumers reflect the effectiveness of the educational environment. The final year of the Faculty of Medicine, Colombo, Sri Lanka consists of clinical rotations in Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology and Psychiatry. The Final examination consists of a clinical component (short and long cases) and a theory component.

Objective

To assess the perception of recent graduates regarding the final year educational environment – teaching/ learning methods and content, student evaluation methods, interpersonal and social interactions.

Method

The study population consisted of 180 new Focus Group Discussions graduates. (FGD) were held to gather data and formulate a questionnaire on their learning environment. Sampling was representative ethnicity, of: gender, academic achievement. The two FGDs attended by 18 and 12 participants respectively were conducted by a trained moderator. The data was recorded verbatim, collated and analyzed. А self-administered questionnaire was developed on the educational environment where kev questions were based on several themes emerging from the FGDs. The questionnaire was pre tested and mailed to all graduates and the response rate was 33.33%.

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Results

Majority of graduates found most teaching learning activities in all subjects to be useful for future practice as a competent house officer; specially practicing ward procedures (97.5%). However 56.7% disagreed that monitoring of very ill patients by final year students was useful. The following situations were highly stressful: consultants' behaviour towards students (30%), monitoring of patients (60%) and limited facilities for students in wards (21.7%). The behaviour of the consultant teachers towards the students was highly stressful as some ridiculed students in front of patients, were abusive towards students and not appreciative.

Majority of graduates thought studentdoctor and student-patient relationships were helpful towards learning in all disciplines. The benefit of the studentnursing staff relationship towards learning was rated comparatively low, some reasons being nurses being rude towards students and uncooperative.

Time was inadequate for recreation, relationships and other interests during the final year (85%, 83.3% and 83.3% respectively). Reasons being: inadequate rest between clinical appointments, tight schedule, work load, pressure of exams and long hours at the ward.

Graduates thought that they were fairly assessed most of the time in all disciplines yet a proportion of graduates stated that they were 'bullied' by examiners during the final cases.

Conclusion and recommendations

The learning environment of the final year teaching programme prepared a graduate for future practice with effective learning methods, fair assessment and healthy interactions. However the learning environment needs improvement as some aspects contribute to increased levels of stress and do not promote healthy life styles. Teaching sessions and assessments should be conducted based on adult learning principles.

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Introduction

Educational experiences of graduates' as primary consumers reflect the effectiveness of the educational environment. According to the Australian expert in education G.M.Genn, "the educational environment of the medical school derives from and is a manifestation of the curriculum." He further mentions that "the environment is an important determinant of behaviour of students and it related to their achievements. is satisfaction and success" (Genn, 2001)

Standing The UK Committee on Medical Postgraduate Education (SCOPEME, 1991) highlighted the importance of educational environment in statement that "A their working environment that is conducive to learning is critically important for successful training". Roff and McAleer (2001) summarises the importance of measuring educational environment along following lines, "If we can identify the elements operating in the educational environment or climate of a given institution or course, and evaluate how they are perceived by students and teachers, we have the basis for modifying them to enhance the learning experience in relation to our teaching goals".

Studving about educational environment is of specific relevance to the Faculty of Medicine, Colombo, which has recently adopted a more system-based and student-centered curriculum. A study done among first year students using the validated Dundee Ready Educational Environment Measure (DREEM) questionnaire revealed а positive environment with a mean DREEM score of 144 (72%) (Seneviratne et al., 2002). However Moor-west (1989) point out that the students' perceptions of learning change differently environment may across time. Clarke et al. (1984) were also in the same opinion and suggest that while students' high expectations might be met initially, it may be difficult to meet them over the entire curriculum. Therefore it is pertinent to evaluate student perceptions of the final year learning environment.

Clinical teaching in the Faculty is initiated from the first year itself. During the final year, Professorial appointments in the university teaching units are done in the major specialities of Medicine, Surgery, Gynaecology and Obstetrics, Paediatrics and Psychosocial Medicine (Faculty of Medicine, 2000).

Teaching/learning activities in the professorial appointments include clerking of patients, teaching ward rounds and classes, tutorials, monitoring of very ill patients, practicing ward procedures and student presentations. In addition to the above a clerkship based 'Assistant House Officer Scheme' in Medicine and delivery room activities in Gynaecology and Obstetrics practiced (Faculty are of 2004a.b). Students Medicine. are assessed in the final year through multiple choice questions, essay questions, long and short cases, OSCEs and viva voce examinations in the above specialities (Faculty of Medicine, 2004c).

The objective of our study was to assess the perception of recent graduates regarding the final year educational environment, with regards to its teaching/ learning methods and content, student evaluation methods, interpersonal and social interactions.

Method

The study population consisted of 180 new graduates. Focus Group Discussions (FGD) were held to explore perceptions of the final year learning environment. Sampling was representative of: ethnicity, gender, academic achievement. The two FGDs attended by 18 and 12 participants respectively were conducted by a trained moderator. The data was recorded verbatim, collated and analyzed. As a self follow up, а administered questionnaire was developed on the educational environment where kev questions were based on several themes emerging from the FGDs. The questionnaire consisted of eight structured items each with 2-9 questions on a likert scale, plus 4 open items and was designed to provide information on teaching/ learning, perceived 'stressful' situations. effect on personal life. interpersonal relationships and assessments. The questionnaire was pre tested and mailed to all graduates, and the response rate was 33.33%.

Results

The results are a cumulative analysis of both qualitative and quantitative data.

Teaching /Learning methods

The majority of graduates found most teaching learning activities in all subjects to be useful for future practice as a competent house officer; specially practicing ward procedures (97.5%). However the some participants of the FGD were of the view that "teaching was vague and individuality of students was not entertained".

Many graduates thought that monitoring of very ill patients by final year students was not useful (56.7%). Some reasons stated for this opinion were "waste of time", "it served no educational purpose", "was detrimental towards group dynamics" and "it is a task which is designated to ward nursing staff".

Contrary to the FGD where several expressed descent on the AHO scheme in Medicine, 88.3% of questionnaire respondents agreed that the scheme was useful though a few comments were made that it was merely doing the House Officers' "Dirty Work".

Interpersonal Relationships

Majority of graduates thought studentdoctor and student-patient relationships were helpful towards learning in all However some negative disciplines. stated on the comments student consultant teacher relationship were: "We "our were not treated as adults", individuality was not entertained", "Some consultants were irritable and we were scolded for not knowing minor details", "different people giving the same answer are treated differently". This behaviour of the consultant affected the student-patient relationship detrimentally. According to comments of some graduates "patients don't trust the student after the consultant scolds the student".

The benefit of the student-nursing staff relationship towards learning was rated comparatively low, some reasons being nurses being rude towards students and uncooperative.

Social atmosphere

Time was inadequate for recreation, relationships and other interests during the final year (85%, 83.3% and 83.3% respectively), the reasons being; inadequate rest between clinical appointments, tight schedule, work load, pressure of exams and long hours at the ward.

Assessments

Graduates thought that they were fairly assessed most of the time in long and short cases of all disciplines yet a significant proportion of graduates (20%) stated that they were 'bullied' by examiners during the final cases. Few graduates stated that "sometimes a student is evaluated by a preformed attitude of that student" and "questioning in cases was inconsistent". Further 73.3% of graduates thought that MCQs tested facts and figures rather than problem solving and application of knowledge.

Stress

A stressful environment not conducive for learning emerged as a prominent theme in both the FGD and the questionnaire analysis. The following situations were highly stressful: consultants' behaviour towards students (30%), monitoring of patients (60%), assessment of student attitudes during the Paediatrics appointment (25%) and limited facilities for students in wards (21.7%).

The behaviour of the consultant teachers towards the students was highly stressful as some ridiculed students in front of patients, were abusive towards students and not appreciative. Graduates considered the attitude assessment of paediatrics to be subjective and some were of the view that "the content assessed was irrelevant".

Though identified as a stressful situation in the FGD, labour room work was found to be enjoyable to a significant proportion of graduates (28.3%).

Discussion

Several studies worldwide have evaluated the perceptions on the final year learning

environment. Our results are discussed in the light of these studies.

The majority of graduates agreed that most teaching/ learning activities were useful in gaining knowledge and skills necessary to practice as a house officer. A study of Students' perspectives on the educational environment at the Faculty of Medical Sciences, Trinidad; where the DREEM questionnaire administered to final-year medical students and first-year medical interns, the overall student perceptions were positive with a mean DREEM score of 109.9 (Bassaw *et al.*, 2003).

Traditionally, apprenticeship learning has been relevant for the medical profession (Vleuten *et al.*, 2000), and still the apprentice system of clinical clerkship remains the cornerstone of clinical instruction (Harth *et al.*, 1992). This view is reflected by most graduates who found the clerkship based AHO scheme in Medicine to be useful. Yet a study at the University of Antwerp, Belgium concluded that Clinical clerkships do not automatically provide an ideal learning environment for medical students (Remmen *et al.*, 2000).

Some teaching/ learning activities such as labour room activities were found to be enjoyable by many graduates and this view is reflected in the above study where delivery room activities were reported most favourably with regard to instructive value. The attitude of the consultants was viewed as prejudiced and temperamental by some graduates. This view is reiterated in many studies by comments such as: tutors displayed favouritism, anger, a patronizing attitude, and even victimized and ridiculed students (Harth et al., 1992).Incidents of humiliation by senior medical staff occurred when the students were repeatedly unable to answer the same questions or when they were criticised for an inadequate clinical examination (Lempp & Seale, 2004). Their individuality was not recognised in that neither their existing skills nor the experience were acknowledged by doctors (Seabrook, 2004).

This behaviour of consultants was rated as being highly stressful by many graduates. Even in other studies relationships with consultants aroused strong feelings, with students describing stressful situations such as being humiliated in front of their peers (Radcliffe & Lester, 2003). Similar aspects of the teacher-student relationship have been reported as stressful, such as being expected to have medical knowledge which they had not been taught and incidents when they were shouted at or felt humiliated (Lempp & Seale, 2004). This highly negative aspect of stress in teaching through humiliation is a recurring theme.

The low ratings for student-nurse relationship in the study are reflected in studies and several reasons other postulated. In one study, "several incidents where nurses and midwives treated medical students disrespectfully are reported, and such behaviour may indicate a degree of professional rivalry" (Lempp & Seale, 2004). Another states that "students' relationships with nurses could also be difficult, reflecting some of the tensions between the two professions, and the lack of a formal role for nurses in medical education" (Lempp & Seale, 2004).

With regards to assessing final year clinical training, some graduates perceived examiners of long/ short cases to be prejudiced and inconsistent. According to Ponnamperuma et al., 2003) these traditional forms of assessment have been excluded from current assessment systems of many institutions. Reiterating our findings they further state that these methods lack standardisation and objectivity, and suggest variants such as OSCEs and alternatives such as Portfolio assessments as better methods.

The MCQ type currently used at the final year assessments are true/ false questions, which graduates found to test facts. Swanson (Harth *et al.*, 1992) highlights this deficiency by stating that "in true/ false questions we are pushed towards assessing recall of an isolated fact", and suggests that "application of knowledge, integration, synthesis and judgement questions can better be assessed by one-best-answer questions. As a result, the NBME has completely stopped using true/ false formats on its examinations"

Conclusion and recommendations

The learning environment of the final year teaching programme prepared a graduate for future practice with effective learning methods. However the learning environment needs improvement as some aspects contribute to increased levels of stress and do not promote healthy life styles. Teaching sessions and assessments should be conducted based on adult learning principles.

References

Bassaw, B., Roff, S., McAleer, S., Roopnarinesingh, S., De Lisle, J., Teelucksingh, S. & Gopaul, S., (2003) Students' perspectives on the educational environment, Faculty of Medical Sciences, Trinidad, *Medical Teacher*, 25(5) pp. 522-6

Case, S.M., & Swanson, D.B. (2002) Constructing written test questions for the basic and clinical sciences, National Board of Medical Examiners, Philadelphia, USA.

Clarke, R.M., Feletti, G.I. & Engle, C.E. (1984) Students Perceptions of the Learning Environment in a New Medical School, *Medical Education*,18, pp. 321-5

Faculty of Medicine (2000) Student Handbook 1999/2000, Faculty of Medicine, University of Colombo, Sri Lanka.

Faculty of Medicine (2004a) Professorial Unit Medicine clinical attachment programme book, Faculty of Medicine, University of Colombo, Sri Lanka.

Faculty of Medicine (2004b) Reproductive health module Hand book for module and clinical training. Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Colombo.

Faculty of Medicine (2004c) The Curriculum of the Faculty of Medicine University of Colombo, Sri Lanka.

Genn, J.M. (2001) Curriculum, environment, climate, quality and change in medical education: a unifying perspective, *Medical Teacher*, 23(4) pp. 337–44

Harth, S.C., Bavanandan, S., Thomas, K.E., Lai, M.Y. & Thong, Y.H. (1992) The quality of studenttutor interactions in the clinical learning environment, *Medical Education*, 26, pp. 321-6.

Lempp, H. & Seale, C. (2004) The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching, *BMJ*, 329, pp.770-3

Moor-West, M.(1989) Distress and Attitudes toward the learning Environment. Effects of Curriculum Innovation, *Teaching and Learning in medicine*, 1(3) pp.151-7.

Ponnamperuma, G., Davis, M., McAleer, S., Karunathilake, I. & Martindale, J. (2003) *The long case and the short case: a review of the literature.* Assessment for the new curriculum (Intercollegiate Specialty Board, Royal Colleges of Surgeons, UK). Centre for Medical Education, Dundee, pp 6–17.

Radcliffe, C., & Lester, H. (2003) Perceived stress during undergraduate medical training: a qualitative study, *Medical Education*, 2003; 37(1) pp32.

Remmen, R., Denekens, J., Scherpbier, A., Hermann, I., van der Vleuten, C., Van Royen, P. *et al.* (2000) An evaluation study of the didactic quality of clerkships, *Medical Education*, 34, pp. 460.

Roff, S & McAleer, S. (2001) What is educational climate? *Medical Teacher*, 23(4) pp. 333-334.

SCOPEME. (1991) Good practice in SHO training, London, UK.

Seabrook, M.A. (2004) Clinical students' initial reports of the educational climate in a single medical school, *Medical Education*, 38(6) pp 659.

Seneviratne, R. De A., Karunathilake, I., Ponnamperuma, G. & Samarasekera, D. (2002) New entrant students' perceptions of Colombo Medical Faculty educational environment, International Conference on Curriculum Changes in Medical Schools, Faculty of Medicine, University of Colombo, Sri Lanka.

Van Der Vleuten, C., Scherpbier, A., Dolmans, D.H.J.M., Schuwirth, L.W.T., Verwij Nen, G.M. & Wolfhagen, H.A.P. (2000) Clerkship assessment assessed, *Medical Teacher*, 22(6) pp.592-600.

Effectiveness of mind maps as a learning tool for medical students

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Background

The Mind Map is an expression of Radiant Thinking, the associative thought processes that proceed from or connect to a central point, and is therefore a natural function of the human mind. It is a powerful graphic technique that can be applied to improve learning and clearer thinking (Buzan & Buzan, 1993). Mind maps can be used as self-learning methods that facilitate understanding of difficult concepts.

Objective

The curriculum of the Faculty of Medicine, University of Colombo, Sri Lanka emphasises the need for self-directed learning and deep learning. Our objective was to evaluate the effectiveness of using mind maps as a self-learning method for the new entrants to the Faculty.

Method

Seventy-four new entry medical students were randomly selected and assigned to

two equal groups based on their high school performance. (Mind map vs. selfselected study technique). A text on iron deficiency anaemia was selected as selfstudy material. The mind map group was given a 30-minute lesson in the technique. Both groups were exposed to the study text for a 45-minute period and were requested to answer four structured essay guestions based on the study text.

Results

There was no significant difference between the marks of two groups. The average mark of the entire group was 34.4%. Majority (97.1%, N=34) from the mind map group felt that it is useful to summarize information and 87.9% want to study further about mind mapping.

Discussion

Mind map technique is not superior in newly trained for short-term learning; however majority perceived it as a useful learning tool.

Background

A mind map is a diagrammatic representation of words, ideas, tasks or other items associated with a study topic. These maps are useful tools that can be utilized to represent the structure of knowledge in a form that is psychologically compatible with the way human beings construct meaning (All & Havens, 1997).

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In a mind map the main study topic is drawn at the centre with keywords branching out in a divergent pattern. These key words correspond to subtopics and then smaller branches project from the subtopics with further details regarding the subject being included in а branching progressively pattern. Βv undergoing this process, information initially contained within passages of text becomes hierarchically organized, with the most general information being presented in the centre of the mind map and material of increasing detail being presented at the extremes (Farrand et al., 2002). It is used to generate, visualize, structure and classify ideas, and as an aid in study, problem organization. solving. and decision making. The elements are arranged intuitively according to the

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importance of the concepts and they are organized into groups, branches, or areas. The uniform graphic formulation of the semantic structure of information on the method of gathering knowledge, may aid recall of existing memories.

Mind maps can be used as self-learning methods, which enhance the focus on salient rather than irrelevant aspects. It also facilitates the achievement of a understanding conceptual of the fundamental principals of a huge amount of information and enables to assemble and integrate many concepts together. Mind maps promote active learning. Analysis of the data indicates that, as a strategy to improve memory for written information, the mind map technique has the potential for an important improvement in efficacy (Farrand et al., 2002).

Medical schools have been changing their educational programs and teaching strategies, at national and international levels, to ensure that students have active responsibility for their learning process and are prepared for life-long, self-directed learning (West et al., 2002). The effort toward developing active learning was based on the concern, expressed by experienced medical educators. that students memorized facts ("rote learning") instead of understanding and applying concepts ("meaningful learning")(Rendas 2006). Unless et al.. there is understanding, students may only commit unassimilated data to short-term memory and no meaningful learning will occur (All & Havens, 1997).

The curriculum of the Faculty of Medicine, University of Colombo, Sri Lanka emphasises the need for self-directed learning and deep learning. Therefore the study was performed not only to evaluate the effectiveness of mind maps as a self learning method, but also with the objective of introducing this technique to the new entrants to the faculty.

Objective

Educational materials have recently emerged which aim to improve memory for medical information by representing facts in the form of "mind maps". Our aim was to evaluate the effectiveness of using mind maps as a self-learning method.

Methodology

A total of seventy four students from the new entrants to the Faculty of Medicine, Colombo were randomly selected to participate in the study. They were assigned to two equal groups designated the mind map group and the self-selected study technique group according to the rank obtained at the university entrance examination. There were only four dropouts from any of the sessions.

A text on "iron deficiency anaemia" was selected from a recommended text book as self study material. The topic of the text was carefully chosen to minimize the possibility of participants' existina knowledge in the selected study material from interfering with the results. The investigators developed four structured essay questions from the study text and all questions were of a similar length and required the recall of a specific piece of information presented in the text. Each question reflected a similar level of difficulty.

Initially the participants in the mind map group were given a 30-minute lesson on the mind map technique to train them on the application of the method. The lesson used material totally unrelated to the study text to demonstrate the best ways to produce and memorize mind maps. During the training the participants were given the opportunity to ask questions regarding the technique.

Following this training both groups were exposed to the selected study text on iron-deficiency anaemia for a 45-minute period.

Participants in the mind map group were advised to divide the time between reading the study text and producing a mind map and studying it. Participants in the selfselected study technique group were advised to divide their time between reading the text and applying their existing study methods. None of the participants in the self-selected study technique group used mind maps as their preferred method of study. Following the study session all participants were again given 30 minutes to answer the questions. The perception regarding the technique was obtained from the mind map group using a selfadministered questionnaire.

In the study, a method was developed to score the Mind Maps prepared by students taking into account the map's structure as well as its content. The answers were marked using this pre-prepared marking scheme. Data was analysed using the Statistical Package for the Social Sciences version 15.

Results

The average mark obtained by the entire group was 34.4%. The average mark obtained by the mind map group was 31.3%. It was 37.6% in the self selected study technique group. There was no statistically significant difference between the two groups.

However all the participants (100%, N= 34) in the mind map group have realized that it is a useful way of memorising information. Almost all (97.1%, N= 34) from that group perceived the technique as a useful method of summarising information and wanted to follow the technique for their future studies. A majority (87.9%, N= 34) wanted to learn more about mind maps.

Discussion

The students of the mind map group as well as the self selected study technique group were able to achieve a satisfactory performance level after being exposed to a totally unfamiliar topic. A majority in the mind map group had grasped the concept of developing mind maps after the initial training session. A majority designed the mind maps incorporating many of the key features of mind maps. The information embedded in the mind maps varied from one student to the other reflecting individual educational needs. Considering the fact that they have been exposed to the technique for the first time, it is supportive towards promoting the use of mind maps as an effective self-learning tool.

However the mind map technique did not show anv superiority over other conventional study techniques as a short term learning method in a newly trained population. But the majority of the mind map group perceived it as a useful way of summarising information. They also perceived it to be helpful in memorising information in an organized manner compared to their previous self study techniques. Students expressed their interest to learn more about the mind mapping technique and follow it in their future academic activities.

The mind map technique may not be effective in improving retention of information in the short-term. Further studies should be undertaken to evaluate its effectiveness in retaining information in the long-term. Students' perception of the mind map technique as an effective learning tool is a positive factor in deciding the use of mind maps as a learning method.

References

All, A.C. & Havens, R.L. (1997) Cognitive/concept mapping: a teaching strategy for nursing, *Journal of advanced nursing*, 25, pp 1210-9.

Buzan, T. & Buzan, B. (1993) *The Mind Map Book*, London, BBC Worldwide Limited.

Farrand, P., Hussain, F. & Hennessy, E. (2002) The efficacy of the `mind map' study technique, *Medical Education*, 36 (5), pp 426-31.

Rendas, A.B., Fonseca, M. & Pinto, P.R. (2006) Toward meaningful learning in undergraduate medical education using concept maps in a PBL pathophysiology course, *Advances in Physiology Education*, 30, pp 23-9.

West, D. C., Park, J. K., Pomeroy, J. R. & Sandoval, J. (2002) Concept mapping assessment in medical education: a comparison of two scoring systems, *Medical Education*, 36 (9), pp 820-7.

West, D. C., Pomeroy, J. R., Park, J.K., Gerstenberger, E.A. & Sandoval, J. (2000) Critical thinking in graduate medical education: A role for concept mapping assessment?, *Journal of American Medical Association*, 284 (9), pp 1105-10.

Foundation Course for MBBS students at entry level: Experience at an Indian medical school

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Pramukhswami Medical College introduced an orientation course for new medical students. This seven day program titled Foundation Course presented the students with various learning experiences aimed at developing knowledge, skills and attitudes required for a medical professional. The evaluation of the

Introduction

The selection of students as recommended by medical council of India to medical colleges is based on merit of the candidate at qualifying examination and/or a competitive entrance examination (Medical Council of India, Rules and Regulations 1997). The selection criteria do not take care of non-scholastic abilities of the students. Many students who pursued rote learning in secondary and higher secondary education may find it difficult to cope up with the different educational environment in medical college. Furthermore students from diverse cultural backgrounds may find adapting difficulties to the new environment. Medicine is a profession that requires not only the mastery of a large body of knowledge and the acquisition of clinical skills, but also high standards of behaviour and appropriate attitudes. It is also important to train the undergraduate students in techniques of learning which will motivate them to develop as selfdirected learners.

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Correspondence: Dr. Himanshu Pandya, Department of Medicine, Pramukhswami Medical College, Karamsad-388325, Gujarat, India E-mail: <u>dr. hvp@yahoo.com</u> program was rated as successful by a majority of students. The authors recommend introduction of such foundation courses to be mandatory at the entry level in Indian medical schools.

Key words: Foundation course, MBBS, India, Entry level

Recently the Task Force on Medical Education for National Rural Health Mission of Ministry of Health and Family Welfare has suggested conducting a foundation course from the first year which can be reinforced later during the course, until the internship phase. The objective of the foundation course would be to sensitize the learners with essential knowledge and skills which will lay a sound foundation for their pursuit of learning across the subjects in the MBBS course and later on a career in medicine (National Rural Health Mission, 2007). This prompted faculty at Pramukhswami Medical College, Karamsad, Gujarat to develop, implement and evaluate a foundation course for students admitted to the MBBS course in August 2007.

Material and Methods

Education Unit (MEU) Medical in consultation with the administrative head of the centre (Chief Executive Officer) and faculty from various departments at the college developed and implemented a foundation course of seven days duration. In-house faculty with interest and expertise in the respective fields reinforced by external faculty was selected to deliver the topics. The selected faculty was oriented about the purpose and objectives of the Subsequently course. they designed delivery of individual topics using different teaching and learning methods. Three faculty from pre-clinical and para-clinical

subjects were chosen for coordinating the programme efficiently. The module was designed with the objective of exposure of students at entry level to appreciate and understand the following;

- History of Medicine with reference to the evolution of medical knowledge
- Value of Professionalism and Ethics in Medicine
- Use of communication skills in Medicine
- Overview of curriculum at Pramukhswami Medical College and use of different teaching learning methods
- Ability to collect, analyze information from various sources and to correlate them
- Relevance of psycho-social factors in relation to the problem of health and diseases
- Importance of teaching-learning techniques and time management in a professional degree course
- Stress in medical profession and coping strategies
- Need to cultivate logical and scientific habits of thought (research aptitude), clarity of expression and independence of judgment
- Expectations of society from medical profession
- Skills of first aid and cardio pulmonary resuscitation
- Health and community orientation instead of only disease and hospital orientation
- Importance of proficiency in English language in a professional course

The programme began on first day with a welcome address to students and parents by the dean of the college, faculty dean and CEO of the centre. Orientation included a brief history of the centre and its vision and mission with specific reference to institutional commitment to excellence in teaching and learning. This also served as a platform for students to self introduce, get to know each other's background, interest and hobbies. The

parents had the chance to interact with faculty. Visits to different departments of Pramukhswami Medical College and Shree Krishna Hospital were conducted in groups of twenty five accompanied by guides. The didactic presentations on topics during the week were supplemented by different teaching/learning methods like; didactic sessions with interaction, structured interactive sessions, small group activities followed by presentations to the large group, role play, use of video clips, demonstration alone and with hands on experience and visit to library. On the last day, the foundation course was evaluated by written feedback from the students. A questionnaire was developed with a view to elicit students' response in respect to their prior knowledge, gain in knowledge and need for further knowledge on each topic. The students were also asked to indicate the extent to which various topics delivered in the foundation course helped them to understand the various skills and attributes required by a medical professional along with a need to different understand а learning environment in the midst of cultural diversity. An open space was provided for the students to express and share their views regarding overall impression and impact of the programme in making them self confident to pursue a challenging course of study in medicine. Since it was an anonymous questionnaire, no written informed consent was obtained.

Results

The class of 2007 consists of students from all corners of state of Gujarat and includes four non resident Indians. Fifty seven out of 100 students are from schools with Gujarati as medium of instruction while the rest had their schooling in English medium either in India or abroad. Ninety seven out of total hundred students responded to the feed back.

Table 1 shows the students' perception of extent of existing knowledge, gain in knowledge from the respective sessions in foundation course and importance of the same in medical course.

Sr.		Knowledge prior to						Knowledge essential for medical				
No.	Session		ses	sion	K	Knowledge gain after session			profession			
					not	to	to		not	to	to	
				not	at	some	great	not	at	some	great	not
		Yes	No	attempted	all	extent	extent	attempted	all	extent	extent	attempted
	History of											
	Evolution of											
1	Medicine	7	85	5	3	66	23	5	14	54	26	3
	Professionalism											
2	& Ethics	24	70	3	12	41	43	1	8	42	46	1
	Communication											
3	Skills	26	69	2	1	37	57	2	2	43	50	2
	Overview of											
4	MBBS course	27	66	4	2	34	58	3	5	50	40	2
	Use of Library &											
5	Internet	50	45	2	19	58	20	0	14	34	47	2
6	Holistic Medicine	26	70	1	16	55	25	1	11	55	26	5
	Study skills &											
	Learning											
7	techniques	48	48	1	6	28	63	0	6	26	62	3
	Time											
8	management	50	45	2	9	35	46	7	6	36	55	0
	Stress: How to											
9	manage stress	24	71	2	11	39	46	1	15	15	64	3
	Research											
10	aptitude	21	75	1	6	45	43	3	7	46	37	7
	Medical											
	profession in the											
	view of common											
11	man	32	64	1	8	54	31	4	3	63	30	1
12	First aid	24	73	0	1	21	75	0	4	12	79	2
	Cardiopulmonary											
13	resuscitation	3	88	6	4	20	69	4	5	19	73	0
	Community											
14	health care	28	68	1	9	37	46	5	15	36	44	2
	English											
15	Proficiency	54	37	6	2	34	56	5	1	23	69	4

Table 1. Perception of students regarding prior knowledge, gain of knowledge and need forknowledge of each session covered in the Foundation Course August 2007 at PramukhswamiMedical College. [Data: N=Number of students who responded out of 97 in a batch of 100]

Many of the students stated that they did not have prior knowledge of topics covered in most of the sessions except for learning skills and time management, library and internet usage, and proficiency in English language. Majority of students stated that they had a considerable gain in knowledge about the respective topics. It was further observed that students appreciated topics dealing with skill development namely communication skills, learning skills, first aid, cardiopulmonary resuscitation and English proficiency. Majority of students appreciated the importance of all the topics except for history of medicine, holistic medicine and medical profession in the eye of society. Table 2 shows the students' response to the extent of understanding of physical environment of learning in medical course, various skills and learning styles and importance of community health care and scientific approach in medical profession. At the end of course majority of students stated that they understood the learning environment and style better than research and community health.

Table 3 shows open ended response of students regarding their overall impression and suggestions for the foundation course.

Table 2. Students' perception of understanding of physical and learning environment, learning styles and skills, research and community health care after attending the Foundation Course [Data: N=Number of students who responded out of 97 in a batch of 100]

Sr.	Item	Not	To some	To great	Did not
No.		at all	extent	extent	respond
1	To understand the different				
	physical and learning		26	66	1
	environment in a professional	5	30	55	I
	college				
2	To understand the various skills-				0
	learning techniques, time		39	54	
	management, first aid, CPR,	4			
	communication skills, skill of				
	using academic resources and				
	their importance in medical				
	profession				
3	3 To understand the importance of research aptitude and community health care in medical profession				
			50	39	0
			52		U

Table 3: Major themes regarding the foundation course emerging from open ended responses of students

- 1. A good program which helped me to get oriented with campus and learning environment.
- 2. The program helped me to develop confidence to face the challenging medical course.
- 3. I liked the whole program, especially sessions dealing with acquiring skills like learning skills, time management, coping with stress, first aid and cardiopulmonary resuscitation.
- 4. We got to know each other. Overall it was a very good beginning to the medical course.
- 5. Though lengthy, it was useful.
- 6. All medical colleges should have such a program.

Discussion

Colleges and universities worldwide develop and implement students' orientation programs to acclimatize them to campus environment, familiarize them with teaching programs, helping them to adapt to the academic challenges as they move from high school into undergraduate programs (Taylor & Massy, 1996). A literature search conducted on the Google search engine and Pubmed using key words "Foundation Course", "Orientation Course", "Medical College", vielded no published paper from India on the subject. attempt The first bv facultv at Pramukhswami Medical College to introduce a foundation course for medical students focused on development of behavioral competency, methods to familiarize students campus to techniques and environment, learning ways to facilitate the stress coping strategies of the students. The participation in sessions and feedback of newly admitted students was verv encouraging. The feedback response very clearly indicated the extent of satisfaction on the part of students. Such a structured foundation course would help students coming from a very different learning environment to cope with the vast body of knowledge and skills required in the dynamic and rapidly changing healthcare system. We recommend that a foundation course should be made mandatory at the entry level in the MBBS course.

References

Medical Council of India (1997) Foundation Course-, Salient Features of Regulations On Graduate Medical Education, The Gazette Of India- 17th May 1997. Accessed on August 31, 2007 http://www.mciindia.org/know/rules/rules_mbbs.htm

Taylor, B.E. & Massy, W.F. (1996) Strategic indicators for higher education, Princenton, NJ: Peterson's.

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- All faculty who delivered respective sessions and students who responded to feedback

Are PowerPoint presentations fulfilling its purpose?

M Thomas, B Appala Raju

Nowadays, most lecture classes are conducted using **PowerPoint** presentations, assuming that incorporation of computer technologies would enhance student learning and sustain interest in the topic. But is it fulfilling its purpose? Therefore, to understand the student perspective on this issue, 72 students of II MBBS were given a questionnaire, wherein they were asked to choose as to which method of presentation is the preferred one for the various given attributes. Chalk board (CB) and Power Point (PP) were the two methods that

compared. According were to the students, clarity of words, illustrations, real pictures and summarizations were some of the attributes best dealt with on PP, whereas, explanations, clarity of concepts and learning to draw diagrams are better done on a CB. Majority of students feel that both CB and PP should be used simultaneously in all classes. An appropriate and discrete mix of both PP and CB would be beneficial for enhancing student learning and achievement. Key Words: Chalk board, PowerPoint

Introduction

Lectures still remain the most common mode of instruction in higher education. Students learn from lectures by listening, observing, summarizing and note taking (Brown & Manogue, 2001). Sometimes understanding is achieved during a lecture and sometimes it emerges when students pour over their notes after a lecture. Lectures can be supplemented with audiovisual aids for better illustrations, clarity and learning (Brown & Manogue, 2001; Brill & Galloway, 2007; Bransford et al., 2001; Lopresti, 2004). PowerPoint presentations were introduced about 10 years back in our institution. It was a novelty initially with very few takers. As teachers gained confidence with the new technoloav and facilities for such presentations became available for every classroom, regular use became a feature, and 99.9% of the teachers now use it regularly, leaving chalk boards and over heard projectors, а rarity inside classrooms. With PowerPoint, people feel that they can get away with practicing less, as they have words in front of them. It has thus, slowly and steadily become a

method to dissipate large number of facts, interspersed with illustrations and animations, all packed in 45 minutes of lecture time. PowerPoint's design and expected use, adds to the didactic nature of classroom teaching where there is already too much of: teacher-centred (Michelle, 2003), pre planned, lockstep delivery of information, given primarily through words (Mason & Hlynka, 1998). Now the essential question is, 'Is it fulfilling its purpose?'.

Visual images are powerful in attracting attention. But is this attention sustained all through the lecture? What does the student think about the advantages of PowerPoint presentations over the traditional chalk board lectures? How does the student react to these continuous PowerPoint presentations, class after class? PowerPoint can be a powerful classroom tool, but is it coming in the way of learning? Therefore, this study was conducted to understand a student's perspective and their choice, as to whether they prefer PowerPoint presentations or chalk boards for their lecture classes.

Method

A questionnaire was prepared and distributed to all students of II MBBS

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course consisting of 72 students. Some questions were yes/no type and the others were to tick the preferred method of lecture presentations for each of the given attributes. The two methods of lecture presentations compared were, the traditional chalk board (CB) with the Power Point (PP).

Results

All students answered the questionnaire, though all questions were not answered by all students. None of the questions had a 100% affirmative response. Majority (92%) of the students felt that both PP and CB should be used in a single class and that if teachers were to choose between CB and PP, they should do so based on the topic of the lecture (98%), and not based on better technology. The potential to leave a large portion of the lecture content on the chalk board helps to correlate between facts and helps to give a better understanding of the lecture (67%). Attending a lecture helps to learn (91%) and to prepare for examinations (90%). Only a minority of students (29%) felt that uses advanced technology and PP therefore should be the method of choice for delivering lectures. Learning different concepts and how to present an answer in examinations are some of the reasons for attending lectures. 'There is no difference between PP and reading text books', 'too many slides are packed in a 60 minute class', 'PP should be used only for showing illustrations/original pictures' and 'CB for teaching theory' are some of the statements received when students were asked to give general comments about their classes. Only 40% of students regularly take down notes, and that too only the important points. The preferred choices between the two methods based on various attributes are given in Table 1.

Attributes	Chalk board (CB) (%of responses)	PowerPoint (PP) (%of responses)
Flow of thought better	71	29
Stress on important points	44	56
Better Summarization	20	80
Better Explanations	80	20
Large number of facts can be given	16	84
Problem solving better	57	43
Clarity of words	27	73
Clarity of concepts	61	39
Note taking is easier	49	51
Copying diagrams easier	92	8

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<i>i</i> unic		1 10101100	01101000	U 1		101	vanouo	aunou	

Discussion

Many topics in medicine rely heavily on illustrations and other visual aids for proper understanding. Therefore certain descriptive answers require presence of proper illustrations/diagrams for better grades. One of the biggest disadvantages of PP as observed in this survey is that students are not able to copy the diagrams/illustrations shown on the slides. On the other hand a CB lecture allows the student to follow the hands of the teacher and copy the diagrams and conceptualize the information. Structures and procedures that are linked through visualization are more likely to be retained in the long term memory (Brown & Manogue, 2001). Lecturers using PP for most of their lectures should take time to use CB for illustration/diagrams even though it is presented in the PP. Even the best of diagrams on PP cannot be copied. Whereas, any diagram/illustration on a CB can be copied, and it is this process that helps the student to learn as well as to give proper illustrations in their descriptive answers during examinations.

A teacher's pronunciation, loudness and accent may affect clarity of words. Most PP presentations have important parts of lectures on its script; probably that is why 73% of students said that clarity of words is better with PP. Other aspects where PP scored better were for its efficiency in summarizations and ability to dispense large number of facts. Only important points were noted down by most students during lectures. Research cited by Mckeachie (1986) shows that students who take down notes remember material better than the control group not taking notes, even though the note takers turned in their notes immediately after the class. Therefore it is the process of note taking that is most important. There was no perceptible difference in preferences as far as note taking was concerned.

Explaining is a key skill while lecturing and it entails creating connections between facts and concepts in the mind of the learner, which helps him to understand the problem at hand. A series of statements/processes that are understood in relation to each other is how an explanation unfolds and a teacher through a series of statements written/diagrams drawn, sequentially, tries to explain a process/procedure on a chalkboard (Brown & Manogue, 2001). The student perceives this unfolding in a sequential manner and thereby it impinges on his mind. All sections of the explanation can be seen on the chalkboard at the same time. This may not be the case with a PP presentation, where if the student didn't get a particular point when the slide was up, he is left foundering. This can be problematic if later points of the lecture depend on understanding earlier points (Tom, 1997). Probably that is why 80% students have opted for CB as the preferred method for understanding explanations. The ability to increase clarity, develop and sustain interest in the subject (Crook, 2002), show pictures / illustrations/animations as an explanatory device and to reinforce main points of lectures are some of the primary purposes of using visual aids (Brown & Manogue, 2001). Therefore PP should be used for only these purposes during a lecture. The effectiveness of a particular medium depends not so much upon the medium per se, but on how it is used. The media do not influence student achievement any more than the 'truck that delivers our groceries' causes changes in our nutrition (Clarke, 1993). Thus, though technology has been recognized as having a great potential to enhance student achievement, this purpose is achieved only if it is used appropriately (Bransford et al., 2001). Good teaching is time consuming, labour intensive and requires good planning (Ludmerer, 2004).

Students in majority feel that both PP and CB should be used in all classes. PP to be used, preferably, only for illustrations that are not possible on CB, for highlighting important points, special situations where large number of facts are to be given and for summarizations. Technology used simply for the sake of technology may be flashy, but it is most likely pedagogically less useful (Michelle, 2003). Use this technology to incorporate 'active learning, student centred learning, (buzz words in departments)'. educational into vour lectures (Michelle, 2003). CB teaching still finds enough takers among students and as teachers we should protect it from extinction. Students can and do learn from who nothina teachers use but a chalkboard or an over head projector in their classes (Michelle, 2003).

Conclusion

Lecturing using different methods are stable phenomena. In practice there are a rich variety of approaches within each method and within each method there is potential for both competent and incompetent teaching. Emphasize on student learning rather than on the quality of the presentation. Use PP to augment rather than to deliver your lecture. There need to be an appropriate and discrete mix of both PP and CB teaching in the classroom for optimum benefit to the students.

References

Brown,G. & Manogue, M.(2001) AMEE Medical Education Guide No.22: Refreshing lecturing: a guide for lecturer, *Medical Teacher*, 23(3) pp.231-44.

McKeachie, W.L. (1986) *Teaching tips: A Guide book for the beginning college teacher*, 8th Edition Lexington, Mass: D.C Heath.

Clarke, R.E. (1993) Reconsidering research on learning from media, *Review of Educational research*, 53, pp. 445-59.

Creed, T. (1997) Power Point, No! Cyberspace, Yes, National Teaching and Learning Forum, 6, pp. 2-4 Electronic version available from http://www.ntlf.com/temp/backup/powerpoint.htm

Denbaste, M. (2003) Power Point, Technology and the Web: More than just an Over Head Projector for the New Century, *The History Teacher*,36, pp 4.

Mason, R. & Hlynka, D. (1998) Power Point in the classroom: Where is the power? *Educational Technology*, pp. 42-5.

Brill, J.M. & Galloway, C. (2007) Perils and Promises: University Instructors Integration of Technology in Classroom- Based Practices, *British Journal of Educational Technology*, 38, pp.95-105.

Ludmerer, K.M. (2004) Learner Centered Medical Education, *NEJM*, 351, pp.1163-4.

Bransford, J., Brown A.J. & Cocking R.R. (Ed) (2000) *How people learn: Brain, Mind, Experience & School,* pp. 206, National Academy of Sciences. 500 5th St N.W., Washington, D.C., 20001

Lopresti, M.E.(2004) How to use Audio Visual aids – a 25 year update, *Medical Teacher*, 26(1) pp.20-2.

Crook, N. (2002) Aspire to teach, Go Deep to learn: A personal view, Medical *teacher*, 24(5) pp. 558.

Medical professionalism: teaching, learning, and assessment

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Professionalism has been variously termed а philosophy, behavioural disposition, skill set, habit, concept having its roots in social justice or social contract. Project Professionalism's categorisation of professionalism provides а comprehensive, operational framework that includes six elements: altruism; accountability; excellence; duty; honour and integrity; and respect for others.

The place of professionalism as an exit learning outcome in the modern health professions' curricula is now established. The curriculum content that should be integrated into different courses must reflect the key attributes of a professional. A rich variety of teaching and learning methods are available for the health professions' teacher to select from, depending on the specific requirements of the course and the context. Goldie et al.

Introduction

'Professionalism' is one of the most elusive notions in modern medical practice. This article reviews the literature

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(2007) found that role modelling and early clinical contact have a profound influence on promoting professionalism. They also found that 'critical reflection' is the most effective technique for promoting professionalism.

Identifying what constitutes unprofessional behaviour is important when assessing professionalism. Portfolio assessment has been used as an assessment method. One-on-one interviews, peer assessment, teamwork exercises, standardised patient student encounters. and generated learning plans are other methods that can be included in the portfolio framework or stand alone. The main assessment tool for professionalism is the rating scale. Rating scales have been used to assess either behaviour in the workplace or response to case vignettes with critical incidents.

relating to defining, teaching and learning, and assessing professionalism in health professions' education. It will be of interest to all doctors who teach medical students.

Definition and content

Professionalism is "a philosophy, a behavioural disposition, and a skill set that results from one of the fundamental relationships in human interaction" (Emanuel, 2004). Epstein and Hundert (2002) indicate that professionalism is built in as a 'habit'. "Professionalism" they suggest, is the "habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for benefit of the individual and community".

'Social justice' has also been strongly linked with professionalism (Wear & Kuczewski, 2004; Wear 1997; Whitehouse & Fishman, 2004). Social justice deals

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with the disparities in health that have been frequently attributed to social inequalities. Physicians, therefore, must consider issues related to socioeconomic disparities in their professional approach to patient care, the so-called 'social contract' model of professionalism (Kurlander *et al.*, 2004).

professionalism However has been interpreted. its definition has been criticised for being "too abstract" (Wear & Kuczewski, 2004) and there have been calls for 'operationalising' the definition of professionalism (Hafferty, 2004). In line with such calls, the 'Outcome Project' (ACGME - American Council for Graduate Medical Education, 2007) has described professionalism as follows (Surdyk, 2003):

- ✓ "Demonstration of respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society; and the profession; commitment and to а and excellence on-going professional development
- Demonstration of commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- ✓ Demonstration of sensitivity and responsiveness to patients' culture, age, gender, and disabilities."

The ABIM (American Board of Internal Medicine) definition of professionalism in their Physician Charter is similar to that of ACGME. The charter states that professionalism is a product of three fundamental principles: "primacy of patient welfare, patient autonomy, and social justice" (Sox, 2002). 'Project Professionalism' (ABIM, 2001) developed the Physician Charter and identified six key elements of professionalism: altruism (giving priority to patient interests rather than self-interests); accountability (being answerable to patients, society and profession): excellence (conscientious effort to perform beyond ordinary expectation, and commitment to life-long learning); duty (free acceptance of commitment to service – i.e. undergoing inconvenience to achieve a high standard of patient care); honour and integrity (being fair, truthful, straightforward, and keeping to one's word); and respect for others (respect for patients and families, colleagues, other healthcare professionals, and students and trainees).

Professionalism and reflective practice

'Reflective practice' has been variously defined. Dewy's (1933) description of reflection as "an active, persistent and careful consideration of any belief or knowledge in the light of the grounds that support it and the further conclusions to which it tends" is perhaps the oldest definition. Emphasising experiential learning, Boyd and Fales (1983) describe reflection as "the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self and which results in a changed conceptual perspective". Such experiential learning is akin to Schon's 'reflection-on-practice' (1983) and reflection-in-practice'. Al-Shehri (1995) suggests that reflection can be carried out at three hierarchical levels: descriptive, analytical or evaluative. Building on these levels. Atkin and Murphy (1993) identify awareness. description. self critical analysis, synthesis, and evaluation as the five key steps of reflection. Of the above steps, Ker (2002) emphasises selfawareness as the main process, around which reflective cycles revolve in clinical consultations. Given the above definitions, an operational definition of reflective practice can be derived by seeking answers to the questions: what did I learn from the experience; what have I to learn further; how will I learn further; and what further learning took place?

Throughout the literature, the process of achieving professionalism has been inextricably linked to reflective practice (Frankford et al., 2000; Lepp et al., 2003; Ginsburg et al., 2003; Stern & Papadakis, 2006). Hilton and Slotnick (2005). explaining this link. note that the professionalism professional acquires through 'practical wisdom' or phronesis, when experience and reflection on experience over a long period are

integrated with the professional's evolving base of knowledge and skills.

Professionalism as an outcome

Professionalism was traditionally part of the hidden curriculum. It was "caught rather than taught", and implicit as an outcome rather than explicit (Stern & Papadakis, 2006).

Of late, however, schools of medicine and allied health professions the world over have recognised the importance of including professionalism as part of the formal, core curriculum. There is strong professionalism support for to be considered as an explicit learning outcome (ACGME, 2007; Harden et al., 1999; CanMeds, 2000), a skill set (Emanuel, 2004) or a competency (Leach, 2004; Hester and Kovach, 2004; Fryer-Edwards Baernstein, 2004). Many medical & schools have either integrated curriculum content about professionalism within their curriculum, added courses on professionalism in the first two years, or introduced assessment have of professional behaviour into the clinical clerkships (Whitcomb, 2002).

A course that has professionalism as an outcome has to consider curriculum content, teaching and learning methods, and assessment.

Curriculum content relating to professionalism

In a systematic review, Veloski et al. decision (2005) identify ethics, reasoning, making/moral humanism. multiculturalism, empathy, values, truth telling, care for the vulnerable, trust, attitudes and communication, confidentiality of patient data, contact with patients, emotional intelligence, mental health. and self-assessment (using reflective practice) as the key attributes of a professional. These could facilitate the development of professionalism, and should be integrated into the component courses of the curriculum rather than taught as a stand alone course.

Teaching and learning methods

The lynch pin in teaching and learning professionalism is role modeling. Goldie et al. (2007) note that role modeling and

early clinical contact have a profound influence on promoting professionalism. Similarly, many educators believe that role modeling when combined with reflectionon-action effective is in teaching professionalism (Cote & Leclere, 2000; Stern, 2003; and Gracey et al., 2005). Role modeling is a unique, subtle and transcending, mostly taking place unknown to both the teacher and the student. "Individuals who are seen as mentors may not realise that they are teaching professional values, and those not seen as mentors may believe that they are" (Stern, 2003). In short, "role modeling is in the eye of the beholder – the student, not the teacher" (Stern & Papadakis, 2006).

Many have utilised the link between professionalism and reflection to develop teaching and learning methods. Some interesting examples from individual schools are included here, although they are not necessarily practicable in other contexts. Fins et al. (2003) describe a palliative care course at Weill Medical College of Cornell University, New York that attempts to foster professionalism by freeing the students from all clinical responsibilities for two weeks, to give them time to reflect upon their experiences in the clinical setting. Minnesota Medical School's 20-hour first year medical course directly (through topic-specific reading and class exercises) and indirectly (through medical training and socialisation) addresses issues related to professionalism (such as how 'good doctoring' is linked to the status of medicine as a profession and medical practitioners as professionals), and places a strong emphasis on peer-reviewing and self-reflection (Hafferty, 2002). The 'Master Scholars Programme' in New York School attempts Medical to instill professionalism through theme-based societies that conduct student-led discussions on bioethics/human rights, health policy/public health. arts/humanities, biomedical sciences, and medical informatics/biotechnology. The programme contains structured exercises, brainstorming sessions (which can be considered as a precursor of reflection), student-led discussions. and facultv mentoring (Kalet et al., 2002). The 'Professional Initiative' is another study programme of New York Medical School that is integrated with the existing

curriculum to promote professionalism through clerkship essays. The essays provide an opportunity to reflect on clinical experiences (Krackov, 2003). The 'Programme for Professional Values and Ethics in Medical Education' (PPVEME) at Tulane University Medical School, USA encourages self and group reflection about shared experiences (Lazarus et al., 2000). In a student and faculty led educational project, Swedish and American nursing used interactive students videoconferencing technology to engage reflective journaling. drama in in education, photo-language (a form of nonverbal communication using pictures), and off-air meeting discussions to enhance personal and professional development (Lepp et al., 2003). 'Talking Medicine', at University of Michigan Medical School, USA, is a series of tutor-facilitated smallgroup discussions, in which the students reflect on the process of becoming a physician and share ethically difficult but rewarding experiences. This course is backed up by prescribed readings on humanism and professionalism (Lypson & Hauser, 2003). In most of the above study programmes 'sharing experiences' has been a conspicuous, common theme, emphasising the power of revisiting experience. "Parables are a powerful means of transmission of cultural values: the norms of professional behavour have been handed down through generations of doctors using stories with meaning" (Stern & Papadakis, 2006). Ginsburg et al. (2003) agree. "When students report professional lapses they invoke reasoning strategies that enable them to re-story the lapse. Their methods of re-storying provide an insight into the double-binds (or dilemmas) that the students experience, their efforts to transcend these double-binds, and through these, their emerging professional stance" (Ginsburg et al., 2003).

Other techniques used in teaching and learning medical professionalism are: direct observation and feedback (Richardson, 2004); promotion of habit and attitude development (Rhodes, 2004); discourse analysis (Shirley and Padgett, 2005); and mentoring (Sarp *et al.*, 2005).

Assessing professionalism Why assess professionalism

The concept of assessing professionalism is not without dissent. Dudzinski (2004)

speculates that if accurate measurement is attempted, complex aspects such as integrity may run the risk of being oversimplified. Recently, however, this notion of 'measuring the immeasurable' has been overtaken by an evolving consensus that measuring the so-called 'soft' aspects of medical practice is as important as assessing other aspects such as history taking or physical examination. Cohen (2002) suggests that there is a "tendency" to underemphasize, because they are harder to measure. the personal characteristics....., and to overemphasize the more easily measured indices of academic achievement." He has been more assertive in his recent presidential address to the Association of American Medical Colleges (AAMC): "Remember, we can't change what we don't measure...... Use that data (what you have measured) to inform the changes you wish to make to transform whatever crucibles of cynicism you find into cradles of professionalism. Doing so will ensure that the work ahead continues to be guided by physicians with a trustworthy moral compass" (Cohen, 2005).

Unprofessional behaviour

Fundamental to the assessment of professionalism is the identification of what is not professional; i.e. unprofessional behaviour. The work of Proiect Professionalism (ABIM. 2001) is it enlightening in that describes unprofessional behaviour in terms of seven broad categories of 'signs and symptoms'. They are: abuse of power (this is further sub-divided into: abuse while interacting with patients and colleagues; bias and sexual harassment; and breach of confidentiality); arrogance (offensive display of superiority and self-importance); greed (when money becomes the driving force); misrepresentation (lying, which is consciously failing to tell the truth; and fraud. which conscious is misrepresentation of material fact with the intent to mislead); impairment (any disability that may prevent the physician from discharging his/her duties); lack of conscientiousness (failure to fulfill responsibilities); conflicts of interest (this is further sub-divided into: selfpromotion/advertising unethical or collaboration with industry; acceptance of and misuse of services aifts: overcharging, inappropriate treatment or

prolonging contact with patients). The 26 elements that van de Camp *et al.* (2005) identified in their tool to assess professionalism, called the EPRO-GP (Evaluation of Professional behaviour in General Practice) in postgraduate general practice training in the Netherlands, can be mapped to the above ABIM categories.

Methods of assessing professionalism

Data for assessment of professionalism can be provided either by the individuals themselves or by an external assessor. Veloski *et al.* (2005), in a review of measures of professionalism, identify knowledge tests, personality tests, inventories of personal experiences, and attitude/opinion surveys as useful selfreport instruments.

There also has been a keen interest to external develop assessment of professionalism linked to reflective practice. There is disagreement, however, regarding how. Both Davis et al. (2001) and Gordon (2003) state that the portfolio and interview are a method to assess professional and personal development. Baernstein and Fryer-Edwards (2003) show that one-on-one interviews alone can extract more information on reflection and professionalism than critical incident reports alone or in combination with oneon-one interviews. Epstein et al. (2004) comprehensive assessment. call for linkina standardised patients with computer-based learning exercises, a work exercise. and team peer by assessments. followed student generated learning plans. They justify this approach saying that integrating multiple domains of professional competence is feasible, is useful, fosters reflection, and is sufficiently sensitive to detect change in students.

Parker (2006) argues that attitudes and behaviour should not be assessed in the that same way knowledge and competence are assessed. Although knowledge and clinical competence can be assessed by rewarding the candidates with marks for positively demonstrating their capability, attitudes and behaviour should be assessed by giving marks for not displaying unsatisfactory behaviour. Implicit in this argument is the presumption that the candidate has acceptable professional attributes unless proven otherwise. Arnold et al. (2007), however, in a recent multi-institutional survey on peer assessment of professionalism found that there is a necessity to reward not only abstinence from unprofessional the behaviour, but also exemplary behaviour. The respondent medical students in four medical schools preferred feedback on professionalism that was: 100% anonymous; immediate; and focused on both professional and unprofessional rewarding behaviour. by exemplarv behaviour and by addressing serious, repetitive professional lapses (Arnold et al., 2007).

Instruments/tools for assessing professionalism

Though there may be dispute over the method of assessment, the basic tool (i.e. assessment instrument) used in most of the above reports is the rating scale. The Outcome Project (ACGME, 2007) and Project Professionalism (ABIM, 2001), indicate that structured, standardised rating scales are the most effective. Rating scales have been used in two contexts: to assess performance in the workplace, through direct observation (Cohen, 2001); and to assess how the students respond to case vignettes (ACGME, 2007). The P-MEX (Professionalism Mini Evaluation Exercise) of the ABIM (Norcini et al., 2003) and EPRO-GP (van de Camp et al., 2005) are examples of rating scales for professionalism assessing in the workplace. For assessing professionalism using case vignettes, both ACGME (ACGME, 2007) and ABIM (ABIM, 2001pp. 11) have compiled compendia of case (2002) vignettes. Arnold classifies assessment instruments for professionalism as a comprehensive entity' into two similar categories: questionnaires about behaviour in the workplace and critical incident techniques related to residents' behaviours.

Rating scales have been used to assess professionalism in a variety of settings. ACGME, for example, uses rating scales in: self-assessment; direct observation by faculty; ethics OSCE (Objective Structured Clinical Examination) stations; peerassessment (Hafferty, 2002); and 360degree assessment (Kirk, 2007). All the above rating scales have demonstrated validity (Holmboe *et al.*, 2003; van de Camp *et al.*, 2005) and feasibility (van de Camp *et al.*, 2005). Reliability, however, in many of these examples is not yet available.

Conclusion

This paper highlights the emphasis that modern medical curricula place on These curricula use professionalism. reflection in the teaching and learning of professionalism. Reflection alone. however, will not produce a professional, and strong role models are needed. A wide range of professionalism issues should be introduced to the students early in their career, and an arrav ∩f opportunities should be provided for the student to experience these issues in practice. Feedback and reflection on these experiences will help the students internalise the behaviours that are expected from a professional. Assessment of professionalism is desirable and depends on the use of rating scales, with many different raters contributing.

References

ABIM (American Board of Internal Medicine). (2001) *Project Professionalism*. (Philadelphia, Pennsylvania, ABIM). Available at:

ttp://www.abim.org/resources/publications/profession alism.pdf (accessed on 10 August 2007).

ACGME (American Council for Graduate Medical Education). (2007) Professionalism: assessment approaches. In: *Outcome project*. (Chicago, ACGME). Available at:

http://www.acgme.org/outcome/assess/profindex.asp (accessed on 30 March 2007).

Al-Shehri, A. (1995) Learning by reflection in general practice: a study report, *Education for General Practice*, 7, pp. 237-48.

Arnold, L. (2002) Assessing professional behaviour: yesterday, today, and tomorrow, *Academic Medicine*, 77(6), pp. 502-15.

Arnold, L., Carolyn, S., Summers, K., Michael, P., Charles, P., Henry, P. & Stern, D.T. (2007) Can there be a single system for peer assessment of professionalism among medical students? *Academic Medicine*, 82(6), pp. 578-86.

Atkins, S. & Murphy, K. (1993) Reflection: a review of the literature, *Journal of Advanced Nursing*, 18(8), pp. 1188-92.

Boyd, E. & Fales, A. (1983) Reflective learning: key to learning from experience, *Journal of Humanistic Psychology*, 23(2), pp. 99-117.

CanMEDS. (2000) CanMEDS 2000: extract from the CanMEDS 2000 project societal needs working group report, *Medical Teacher*, 22, pp. 549-54.

Cohen, J.J. (2002) Our compact with tomorrow's doctors, *Academic Medicine*, 77(6), pp. 475-80.

Cohen, J.J. (2005) The work ahead. AAMC Presidential Address, 2005. Available at: http://www.aamc.org/newsroom/pressrel/2005/05110 6.htm (accessed on 30 March 2007).

Cohen, R. (2001) Assessing professional behaviour and medical error, *Medical Teacher*, 23(2), pp. 145-51.

Cote, L. & Leclere, H. (2000) How clinical teachers perceive the doctor-patient relationship and themselves as role models, *Academic Medicine*, 75, pp. 1117-24.

Davis, M.H., Friedman Ben David, M., Harden, R.M., Howie, P., Ker, J., McGhee, C., Pippard, M.J. & Snadden, D. (2001) Portfolio assessment in medical students' final examinations, *Medical Teacher*, 23, pp. 357-66.

Dewey, J. (1933) How we think (Chicago, Regnery).

Dudzinski, D.M. (2004) Integrity in the relationship between medical ethics and professionalism, *American Journal of Bioethics*, 4(2), pp. e26.

Emanuel, L.L. (2004) Deriving professionalism from its roots, *American Journal of Bioethics*, 4(2), pp. e17.

Epstein, R.M., Dannefer, E.F., Nofziger, A.C., Hansen, J.T., Schultz, S.H., Jospe, N., Connard, L.W., Meldrum, S.C. & Henson, L.C. (2004) Comprehensive assessment of professional competence: the Rochester experiment, *Teaching and Learning in Medicine*, 16(2), pp. 186-96.

Epstein, R.M. & Hundert, E.M. (2002) Defining and assessing professional competence, *Journal of American Medical Association*, 287(2), pp. 226-35.

Fins, J.J., Gentilesco, B.J., Carver, A., Lister, P., Acres, C.A., Payne, R. & Storey-Johnson, C. (2003) Reflective practice and palliative care education: a clerkship responds to the informal and hidden curricula, *Academic Medicine*, 78(3), pp. 307-12.

Frankford, D,M,, Patterson, M,A, & Konrad, T.R. (2000) Transforming practice organizations to foster lifelong learning and commitment to medical professionalism, *Academic Medicine*, 75(7), pp. 708-17.

Fryer-Edwards, K. & Baernstein, A. (2004) Where the rubber meets the road: a cyclist's guide to teaching professionalism, *American Journal of Bioethics*, 4(2), pp. e22.

Ginsburg, S., Regehr, G. & Lingard, L. (2003) To be and not to be: the paradox of the emerging professional stance, *Medical Education*, 37(4), pp. 350-7.

Goldie, J., Dowie, A., Cotton, P. & Morrison, J. (2007) Teaching professionalism in the early years of a medical curriculum: a qualitative study, *Medical Education*, 41(6), pp. 610-7.

Gordon, J. (2003) Assessing students' personal and professional development using portfolios and interviews, *Medical Education*, 37(4), pp. 335-340.

Gracey, C.F., Haidet, P., Branch, W.T., Weissmann, P., Kern, D.E., Mitchell, G., Frankel, R. & Inui, T. (2005) Precepting humanism: strategies for fostering the human dimensions of care in ambulatory settings, *Academic Medicine*, 80, pp. 21-8.

Hafferty, F. (2004) Toward the operationalization of professionalism: a commentary, *American Journal of Bioethics*, 4(2), pp. 28-31.

Hafferty, F.W. (2002) What medical students know about professionalism, *Mount Sinai Journal of Medicine*, 69(6), pp. 385-97.

Harden, R.M., Cosby, J.R. & Davis, M.H. (1999) AMEE Guide No. 14: Outcome-based education: Part 1 - An introduction to outcome-based education, *Medical Teacher*, 21(1), pp. 7-14.

Hester, D.M. & Kovach, K. (2004) Trumping professionalism, *American Journal of Bioethics*, 4(2), pp. e51.

Hilton, S.R. & Slotnick, H.B. (2005) Protoprofessionalism: how professionalisation occurs across the continuum of medical education, *Medical Education*, 39(1), pp. 58-65.

Holmboe, E.S., Stephen, H., Chung, J., Norcini, J. & Hawkins, R.E. (2003) Construct validity of the MiniClinical Evaluation Exercise (MiniCEX), *Academic Medicine*, 78(8), pp. 826-30.

Kalet, A., Krackov, S. & Rey, M. (2002) Mentoring for a new era, *Academic Medicine*, 77(11), pp. 1171-2.

Ker, J.S. (2002) Thesis: The development of an instrument to assess professionalism-the reflective ability of medical students in an outcome based curriculum, University of Dundee.

Kirk, L.M. (2007) Professionalism in medicine: definitions and considerations for teaching, *Baylor Health Care System*, 20(1), pp. 13-6.

Krackov, S.K., Levin, R.I., Catanese, V., Rey, M., Aull, F., Blagev, D., Dreyer, B., Grieco, A.J., Hebert, C., Kalet, A., Lipkin, M. Jr., Lowenstein, J., Ofri, D. & Stevens, D. (2003) Medical humanities at New York University School of Medicine: an array of rich programs in diverse settings, *Academic Medicine*, 78(10), pp. 977-82.

Kurlander, J.E., Morin, K. & Wynia, M.K. (2004) The social-contract model of professionalism: baby or bath water? *American Journal of Bioethics*, 4(2), pp. e33.

Lazarus, C.J., Chauvin, S.W., Rodenhauser, P. & Whitlock, R. (2000) The program for professional values and ethics in medical education, *Teaching and Learning in Medicine*, 12(4), pp. 208-11.

Leach, D.C. (2004) Professionalism: the formation of physicians, *American Journal of Bioethics*, 4(2), pp. e11.

Lepp, M., Zorn, C.R., Duffy, P.R. & Dickson, R.J. (2003). International education and reflection: transition of Swedish and American nursing students to authenticity, *Journal of Professional Nursing*, 19(3), pp. 164-72.

Lypson, M.L. & Hauser, J.M. (2002) Talking Medicine: a course in medical humanism--what do third-year medical students think? *Academic Medicine*, 77(11), pp. 1169-70.

Norcini, J.J., Blank, L.L., Duffy, F. & Fortna, G.S. (2003) The mini-CEX : a method for assessing clinical skills, *Annals of Internal Medicine*,138(6), pp. 476-81.

Parker, M. (2006) Assessing professionalism: theory and practice, *Medical Teacher*, 28(5), pp. 399- 403.

Rhodes, R., Cohen, D., Friedman, E. & Muller, D. (2004). Professionalism in medical education, *American Journal of Bioethics*, 4(2), pp. e20.

Richardson, B.K. (2004) Feedback, Academic Emergency Medicine, 11(12), pp. e1-e5.

Sarp, N., Yarpuzlu, A.A. & Mostame, F. (2005) Assessment of time management attitudes among health managers, *The Health Care Manager* (Frederick), 24(3), pp. 228-32.

Schon, D. (1983) The reflective practitioner: how professionals think in action (London, Basic Books).

Sox, H.C. (2002) Editorial – Medical professionalism in the new millennium: a physician charter, *Annals of Internal Medicine*, 136(3), pp. 243-6.

Stern, D.T. (2003) Can professionalism be taught? Virtual Mentor: American Medical Association, *Journal of Ethics*. Available at: www.amaassn.org/ama/pub/category/11716.html (Accessed on 9 August 2007).

Stern, D.T. & Papadakis, M. (2006) Medical education: the developing physician – becoming a professional, *New England Journal of Medicine*, 355(17), pp. 1794-9.

Surdyk, P.M. (2003) Education for professionalism: What counts? Who's counting? *Cambridge Quarterly* of *Healthcare Ethics*, 12, pp. 155-60.

Van de Camp, K., Vernooij-Dassen, M., Grol, R. & Bottema, B. (2005) Professionalism in general practice: development of an instrument to assess professional behaviour in general practitioner trainees, *Medical Education*, 40, pp. 43-50.

Veloski, J.J., Fields, S.K., Boex, J.R. & Blank, L.L. (2005) Measuring professionalism: a review of studies with instruments reported in the literature between 1982 and 2002, *Academic Medicine*, 8(4), pp. 366-70.

Wear, D. & Kuczewski, M.G. (2004) The Professionalism Movement: can we pause? *American Journal of Bioethics*, 4(2), pp. e1.

Wear, D. (1997) Professional development of medical students: problems and promises, *Academic Medicine*, 72(12), pp. 1056-62.

Whitcomb, M.E. (2002) Fostering and evaluating professionalism in medical education – editorial, *Academic Medicine*, 77(6), pp. 473-4.

Whitehouse, P.J. & Fishman, J.R. (2004) Justice and the House of Medicine: the mortgaging of ecology and economics, *American Journal of Bioethics*, 4(2), pp. e43.

A Step-by-step Primer for using the Internet for Medical Education

Suptendra Nath Sarbadhikari

This article intends to handhold individuals in exploring the Web judiciously, for educational and / or research purposes, by following some simple steps.

There are certain ways to tackle the "information explosion" in the cyberspace. There are lots of excellent tutorials available on the Internet and just by going to Google, adding "tutorial" at the end of the query phrase retrieves very useful resources.

A simple way of finding any definition (on any subject) is to use the word "define:" before the term in question, e.g., "define: Internet" in the Google search bar. This will retrieve all the definitions of "Internet" available on the World Wide Web.

Another quick start is to go to Wikipedia and in the page on the queried topic; all the relevant terms are hyperlinked. Also, there is a Section of "References" towards the end, and also a host of useful "External links" is listed at the end. Next is to retrieve useful resources from "Open Access" journals and repositories.

Finally, confident users can become experts in interacting actively through Wikis and Blogs.

However, there are certain areas of concern in uploading materials in the wikis and blogs - that is the Copyright of the material. A cultural change in the mindset is required to adopt the new technologies usefully in our setup. Training and awareness in "Netiquette" is of utmost necessity to have fruitful social interactions and useful learning. Access, training (raising awareness) and support to appropriate information and communication technology (ICT) are essential.

Keywords: World Wide Web; Tutorials; Open Access; Medical education and research;

Introduction

Often the Internet and the World Wide Web (WWW) are alluded to as rich sources of resource materials for anything, including information pertaining to medical education and research. However, we are not able to harness the resources optimally because of being overawed by the technology and easily getting lost in the plethora of information provided! This short communication intends to sensitize individuals in exploring the Web judiciously by following some simple steps.

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Some Applications

The rapid technological advent, reduction in web hosting charges and the steady and incremental access to the entire Internet have paved the way (Sarbadhikari, 2007) for various "Open Access Journals" (Suber, 2004). Therefore up to date research findings are available free of cost at the click of a mouse.

There are also common Web-based interactive tools (so called Web 2.0 applications) like,

(a) Wikis (collaborative writing of highquality – the best example is Wikipedia [http://en.wikipedia.org])

(b) Blogs (individual sites containing writings and uploaded materials – one such example is [http://clinicalcases.blogspot.com/]),

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(c) Podcasts (multimedia materials transmitted through the electronic media).

All these are excellent platforms for collaborative and organized learning (Boulos *et al.*, 2006).

Another useful application is eGroups for discussion on various topics of interest within the domain of the users.

However, an important area of concern is the "Copyright" issue for the multimedia materials which can be uploaded in the various web spaces. Albeit most of the Open Access publications allow free distribution with attribution to the author(s), it is of utmost importance to check the copyright notice before uploading or downloading any resource from the Web.

How to Start?

There are loads of excellent tutorials available on the Net. Simply by going to Google, adding "tutorial" at the end of the "query phrase" within half an hour anyone can become much wiser on any topic!

One of the useful ways of finding any definition (on any subject) is to use the word "define:" before the term in question, e.g., "define: Internet" in the Google search bar. This will retrieve all the definitions of "Internet" available on the World Wide Web.

Another quick start is to go to Wikipedia and type in the search bar "Internet" and that will take us to the page [http://en.wikipedia.org/wiki/Internet]. From there all the relevant terms are hyperlinked, there is a Section of "References" towards the end, and also a host of useful "External links" are listed at the end.

What Next?

We have to ensure that we create highquality (research and education) content and also upload them in Open Access sites (Sarbadhikari, 2004).

A cultural change in the mindset is required to adopt the new technologies usefully in our setup (Wyatt & Sullivan, 2005).

Access, training (raising awareness) and support to appropriate information and communication technology (ICT) are essential. Often we tend to take "online transactions" very casually and that can be rather detrimental. Training and awareness in "Netiquette" is of utmost necessity to have fruitful social interactions and engage in useful learning.

In the case of educators, while planning to develop online curricula, the students' needs and preferences (time, place and pace) should not be forgotten in the lure of widely available and useful technology. Definition of learning objectives should precede development of new educational content. The end users (students) should be involved in design and development of the content.

Two Practical Examples

Let us discuss the role of processing information (informatics!), before starting the actual search in cyberspace, with a couple of examples.

I. A 70-year-old man, presenting to the casualty at late night, complains of loss of energy, trouble concentrating, decreased appetite, and He insomnia. has lost considerable weight since his last visit and appears dishevelled. How would you approach this case?

On reviewing this scenario, you can easily see the age group of the man ("geriatric" "elderly") and also that he has or symptoms suggestive of some form of "depression" (may be primary or secondary which has to be determined later). Here, the best way to find evidence will be to frame a search phrase like "geriatric depression differential diagnosis" and search through popular online resources like Google or e-Medicine. On the other hand, if you try to find answers to each of the symptoms randomly in the World Wide Web, you may not get the answer to the question of exactly how to approach such a case - what are the emergency precautions to be taken? If you go through the first 3 or 4 pages retrieved with the above search phrase from popular resources such as Google or e-Medicine, you come to know the increased risk of suicide in such a case and exactly what questions should be asked to get a hint about his suicidal ideation and state of mind. Also, the importance of the drug and alcohol history, medication history and family history would become readily apparent.

II. A person from South Africa appears to be suffering from lethal encephalitis. What could be the causative agents?

In this particular case, the key words are "lethal encephalitis" and "Africa". Therefore the search phrase should include these terms. Google will return with "West Nile Fever", "Trypanosomiasis" and "Mokola virus" right on the first page. Now you can try your hand at eMedicine, PubMed or any other trustworthy sites like that of the CDC and WHO to find more about these conditions.

Conclusions

The test of the pudding is in eating! Once we overcome the initial hurdle of "framing clear-cut (unambiguous) queries" for searching, half the job is done. Then we have to locate appropriate answers – suitable to our conditions. Happy surfing!

If any reader is curious to know more, or any of the tricks mentioned above do not work, please do not hesitate to contact me (electronically) at the email identities mentioned along with my affiliation!

References

Boulos, M. N. K., Maramba, I. & Wheeler, S. (2006) Wikis, blogs and podcasts: a new generation of Webbased tools for virtual collaborative clinical practice and education, *BMC Medical Education*, 6, pp.41, Available at: http://www.biomedcentral.com/1472-6920/6/41

Sarbadhikari, S. N. (2007) The metamorphosis of the Indian Journal of Medical Informatics, *Indian Journal of Medical Informatics*, 2, No. 1:1 [Online] Available at:

http://ijmi.org/index.php/ijmi/article/view/y07i1esns/2 or http://ijmi.org/index.php/article/view/y07i1esns

Suber, P. (2004) A Very Brief Introduction to Open Access, Available at:

http://www.earlham.edu/~peters/fos/brief.htm

Sarbadhikari, S. N. (2004) Basic medical education must include medical informatics, *Indian Journal of Physiology and Pharmacology*, 48(4), pp. 395 – 408. Also available at http://openmed.nic.in/203/

Wyatt, J. C. & Sullivan, F. (2005) Keeping up: learning in the workplace, *BMJ*, 331, pp. 1129 – 32.

Ethics

Arjuna Aluwihare

The re-establishment of the South East Asian Regional Association for Medical Education is welcome- more so is this journal. Upgrading the emphasis, scope, and relevance of ethics is a necessary part of improving medical education in the region. The comments that follow, which are not meant to repeat what is usually dealt with, are designed to provoke some discussion perhaps, about this subject in a different way.

We usually consider the doctor-patient relationship when we speak about ethics. Part of this has to be the evenhandedness with which we deal with private and public sector patients. In particular if we work (legally preferably) in both sectors we need to make sure that no patient can gain any advantage in the public sector by virtue of a fee paid in the public sector. Our communication in the public sector must be good enough to ensue that no relatives creep for a fee into the private sector merely to find out about a patient or get something done. Obviously we must not solicit directly or indirectly, or accept any fees for any kind of service given in the public sector (for which we may be paid by government or university). It is best to keep the two sectors in separate compartments.

As regards non medical staff, nursing, technical, and all other grades, the need to consider and respect them as team members with different and necessary abilities is often articulated. The articulation and practice tend to differ in societies which are still very stratified financially and according to social class; this is unfortunate. Respect produces efficiency and loyalty to the team and the task- and therefore the patient.

Medical colleagues are often left out of the discussion. We need to avoid denigrating colleagues in competition with us. This applies to both seniors and juniors. We need to be able to be seen to be willing to admit mistakes, and to learn from our students. We need also to be able to share scarce resources without hoarding wards, theatres, equipment, and staff as though they are some god given personal property. We need to be able to refer patients to, and discuss problems with even those with whom we have some disagreement of a private nature, if such discussion and referral is in patients' or communities' best interests. If these tenets are not observed patients may be sent out of a town merely because one doctor does not see 'eye to eye' with another for some private, or union, or 'medical politics' reason. Such cannot be in a patient's interests.

Governments have a duty to look after the public and we are instruments of such 'looking after'. If we wish to keep governments off our backs and avoid politicisation of our activity, we need to be able to monitor ourselves and ensue that we have kept the patients and community interest uppermost rather than some parochial need (such as a cost ineffective but wonderful piece of new equipment). This is also ethical behaviour.

These are a few comments which I feel are relevant to the dimension of ethics- to provoke debate and action please.

Noisy classrooms, interested students, active learning

Ravi Shankar

The majority of the classes in my medical school are quiet and orderly with tables and benches arranged with military precision. I also expend a lot of effort to ensure student discipline in my theory classes. With a class of around 75 students, allowing students the freedom to debate and discuss issues can lead to chaos. However, I adopt a different problem-based approach during the learning sessions. Our Pharmacology practical sessions have a student-strength of around 37 and I also conduct a voluntarv Medical Humanities (MH)module with average student strength of around 15 students. Durina these sessions, students can and are allowed much more freedom and independence.

I extensively use small group learning during the sessions. The small groups usually consist of 7 or 8 students each. The small groups consist of students of different nationalities and of both genders. There is a great deal of diversity in the student body.

Clinical problems, case scenarios, role plays and primary literature are used during the Pharmacology learning sessions while excerpts from the literature and art, case scenarios, role plays and debates are used during the MH module. They first get acquainted with the problem, case scenario, literature excerpt etc. Then they analyze the problem from different perspectives and try to identify the main issues involved. They try to work out a solution through problem solving.

During case scenarios and role plays, students in a group identify the main issue of the scenario and also other important subsidiary issues. The group then works

Dr. P. Ravi Shankar, Manipal College of Medical Sciences, P.O.Box 155, Deep Heights, Pokhara, Nepal. Phone: 00977-61-440600 Fax:00977-61-440260. E-mail: ravi.dr.shankar@gmail.com on and debates on the role play which has to be acted out to reflect the main issues involved and possible solutions. The setting of the role play, the actors, and methods of making the role play interesting and innovative are discussed. The role plays generally are in tune with the social and economic realities of Nepal and South Asia. The time allotted for enacting the role play is usually five minutes. After a group presents the 'solution' to a problem or enacts a role play then it is opened to the 'house' for debate and discussion.

The traditional arrangement of desks and chairs in neat rows does not serve the purpose of encouraging group work. The students nearly always rearrange the furniture and the group usually sits in a semicircle or circle to facilitate easy working, brain storming and exchange of information. I and my colleagues always encourage this! The discussion. arguments and debates make for a noisv session. There is a lot of movement within a group and also between groups to discuss and test out new ideas. All this makes for a noisy and lively session!

One of our challenges as facilitators is to ensure that the students are lively and engaging. Creativity needs to be encouraged while maintaining discipline and promoting purposeful and goaldirected activity. Initially, certain students occasionally abused the greater freedom afforded by this method of learning. However, gradually students became aware of the limits imposed and the necessity of self-discipline and selfregulation.

Freedom and creativity are combined with a sense of purposeful, goal-directed activity making the sessions effective. Thus the class room is noisy, the setting is informal but the students are working and learning and also enjoying themselves in the process!

Correspondence:

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