

University of the twentyfirst century: Opportunities and challenges for medical education

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MARCH 2001 SAW AN IMPORTANT CONFERENCE being held in Muscat, heralding significant changes in higher education in Oman and in the Arabian Gulf region in general. With the theme *The University of the 21st Century*, the Conference outlined strategies for modern teaching and learning methods, globalisation, information technology and funds generation. The initiative was evident in the patron's address by the Minister for Higher Education,¹ which outlined plans for higher education in the country, to match the Vision of Oman for the Year 2020, by which time, as a post-oil economy, the country's most reliable asset would be its manpower. Globalisation, skills in information technology, the shift from teaching to learning, a lifelong learning culture and the need to involve private sector in higher education were recurring themes in the various learned papers presented in the Conference.

The conference has struck the right note at the right time for the Arab world, where higher education – especially professional education – lies fettered by examination-oriented courses that are rigid, pattern-bound and overcrowded. Many students fail to acquire professional skills, self-learning ability and the right ethical attitudes. This is particularly true of medical education, where many new graduates are unable to perform adequately in clinical settings. The skills of the products of such an educational system may not be competitive in the future world of telemedicine, where national barriers are irrelevant. As pointed out by Lord Dearing² in his keynote address of the Conference, ultimately, anyone with access to a networked computer, anywhere in the world, will have at his or her fingertips the entire gamut of human knowledge.¹ Future physicians will work in settings that will require co-ordination of clinical data, utilization of consultants and physician extenders, literature retrieval and health care delivery.

In an age where knowledge doubles every five years, and where the shelf life of knowledge rapidly decreases, medical schools cannot rely on the traditional system of imparting knowledge any more.

Medical informatics should be the *medium* for the new curriculum, right from the first preclinical year, so that it remains an integral part of students' routine patient management needs. It is not enough to teach it as a separate course. The curriculum must be problem based and task-oriented, giving the students the skills to effectively use the flood of information they encounter online.

Information technology (IT) specialists in Oman are rising to the occasion, judging by the blueprints revealed by the Director of Centre for Information Technology, Sultan Qaboos University (SQU). Among the plans is an e-learning initiative for Oman, including a national academic network. However, it is the educators who should be responsible for curriculum design and development, course materials, instructional design and directly addressing the students. Here comes the daunting task of educating the educator. The others – infrastructure building, communication, software acquisition, installation, running and maintenance – would be tame compared with it. College of Medicine, SQU is starting a medical education department, which, it is hoped, would be equal to the task. The emerging universities and medical schools are even better placed to introduce problem based and informatics oriented curricula as they are starting from the scratch.

Student motivation is the single most crucial element for the success of problem based and student centred learning methods. For the past two decades I have been finding that if we trust students to learn for themselves, motivation will automatically come—and raise their levels of aspiration. Professional students are young adults who

thrive in a learning environment that has mutual trust, respect, freedom of expression, where individual differences are accepted and where the learning process relates to and uses the learners' own experiences.

Our own experience in the Department of Behavioural Medicine, College of Medicine, SQU is a case in point. Since 1996, the Department has adopted student-centred, interactive learning methods that emphasised on critical reading and thinking that was relevant to the culture of the students. After a period of initial adjustment problems, we found that there was more value in the balance between a discovery approach to learning and the covering-of-material approach to teaching. The students' interest and involvement were overwhelming. They tapped all available sources, ranging from libraries and the Internet to conducting surveys and preparing mini research papers, and discovered hitherto unknown resources in themselves.

Such interactive courses challenge students to acquire skills for their future lifelong education, where immense motivation and self-directed learning skills will be required, especially considering that much of future education is going to be distance learning. Already many reputed universities have adopted distance learning, thus making low-cost higher education easily accessible. Each of the Arab universities has the potential to become a similar centre of distance learning. We could cater to students around the world, not only from the Arab world. All these possibilities have arisen because distance learning is increasingly relying on electronic learning (e-learning), which is wider in scope. It is not essential that the e-learner signs up for a course. Provided the student has clear goals (possible if he or she is trained in a problem based way), a substantial amount can be learnt from the Web alone. The major research journals, scientific databases and professional discussion groups are already online, many of them free. The Arab universities must contribute to this globalisation by actively doing research and making results available online. We ourselves have added our own humble stream to the ocean of interactive information: SQU JOURNAL FOR SCIENTIFIC RESEARCH: MEDICAL SCIENCES is available on the Internet at <http://www.squ.edu.om/med/mj>. A simple Internet search brings up the Journal, and we keep receiving feedback from far-flung regions of the world. This would not have happened, had we been content with the print version.

Professor L. Schrum of University of Georgia³ suggested that globalisation would cause universities to become increasingly interlinked. I would go further and predict the university of the future to be a network of links, more residing in digital media than in campuses. Already, from the comfort of one's desktop, one can closely interact with alien cultures and concepts. However, we need not fear a global monoculture. As Professor Hans Ginkel of the

United Nations University, Tokyo⁴ rightly observed, the reverse is likely to happen, leading to a pluricultural and multipolar world. However, the danger of cultural dilution and distortion exists, which we must combat by inculcating the right ethical attitudes in students. Aware of this, the College of Medicine, SQU, is conducting mandatory interdisciplinary activity weeks and is planning a compulsory course on medical ethics.

A very important note struck in the Conference was that of privatisation of higher education. The pace of change and obsolescence of knowledge will soon render higher education too expensive for the state alone to manage. Privatisation is a proven way to tackle this problem. Many respected centres of learning in Europe, Australia and America are privately owned and operated. Therefore the move to privatise higher and technical education in Oman – with quality control standards – is to be welcomed.

To sum up, based on the insights from the conference and my own two decades' experience as an educationist, I suggest the following action plan for the Arab medical colleges: (i) evolve a curriculum based on student centred and problem based learning, (ii) emphasise hands-on skills by giving students early exposure to clinical settings, (iii) ensure that the faculty becomes adept at medical informatics to be able to guide the students, (iv) nurture in students the appropriate ethical attitudes, human values and cultural roots, (v) start a strong faculty development with the above objectives, especially in the newly opening medical schools and universities, and (vi) privatise, albeit with caution, maintaining strict quality control.

In this age of fast shifting economic trends, a society has to secure itself in something that is durable and flexible. Investment in education is the best option for Oman since twenty years hence, as a post-oil economy, a highly educated and trained manpower will most probably be the only reliable economic resource. The initiatives in the Conference indicate the planners' sensitivity to the needs of the times. Let us allow the winds of information and globalisation blow freely through our universities, while refusing any to blow us off our feet.

REFERENCES

1. **H.E. Al-Manthari YM.** Status and prospects of higher education in the Sultanate of Oman. *International Conference on University of the 21st Century*, Muscat 2001.
2. **Lord Dearing.** University of the 21st century. *Ibid.*
3. **Schrum L.** Creating electronic educational environments: a challenge for educators and learners. *Ibid.*
4. **Ginkel H.** Globalisation of culture and the role of the University. *Ibid.*