International Development Fund report

Rebuilding microbiology education in Iraq

Basrah University was established in 1964 near the Arabian Gulf coast in Iraq's second largest city. It was once the envy of the Arab world and Middle Eastern higher education. A large number of papers was published every year, and students from around the region flocked to its graduate research programmes. As early as 1977, while studying there for my Masters degree in marine biology, I was already using online services: I could order documents and papers electronically straight from the Library of Congress, an innovation lacking in many western universities even a decade later.

Three major wars and 13 years of harsh sanctions have left an estimated 80 % of Iraq's 22 universities and 43 vocational colleges almost totally damaged. One campus in Basrah is just a shell and piles of rubble. The estimated rebuilding costs are $1·2 billion. When I contacted Professor Salman in Basrah 3 months after the fall of the previous regime to find out his needs, he replied, '*we are not talking about libraries and laboratories right now; we need chairs, blackboards, and chalks!*'

Last spring, when Congress budgeted $87 billion for Iraqi reconstruction, only $8 million was allocated to higher education. In the following summer, the newly appointed Minister of Higher Education, Dr Taher Al-Bakaa went to the World Bank and asked for $120 million for the first year. The response was negative. The most substantial American aid to Iraqi higher education came from the US Agency for International Development (USAID), which offered $20 million in grants to five American universities to set up partnerships with Iraqi universities. The programme was slow to get off the ground because of security concerns. The British Council and individual UK universities have done a brilliant job in encouraging exchange programmes, sponsoring many workshops, seminars, and meetings in Britain and Iraqi neighbouring countries to rebuild higher education in Iraq.

In summer 2003 I visited Basrah University and other Iraqi institutions to evaluate their requirements. The Chancellor of Basrah University and some of his staff then came to the UK and highlighted up-to-date microbiology and biotechnology as being in urgent need of reintroduction to the university curricula. The microbiology syllabus being taught in Basrah University was decades old. I approached SGM to sponsor a 2-week training course in new techniques in microbiology. This was successful, although my visit was postponed twice due to the security situation.

I ran an intensive training programme on *Microbiology Techniques and Biotechnology* for 47 staff and postgraduate students from different colleges. They participated with enthusiasm and dedication, despite the limited resources.

The course included basic and advanced microbial identification techniques and demonstrated the use of ILT to compensate for the unavailability of chemicals and equipment. Among CAL programmes generously donated from SGM funds were PCCAL Packages for Educational Institutions; Hyperclinic (Interactive case studies in Microbiology); Microbes in Motion; Bacterial Growth 3; Identibacter interactus (simulation of bacterial identification);

SGM helps microbiologists in developing countries through this fund, usually by supporting training courses and other small technology transfer projects. See **www.sgm.ac.uk** for the rules. The closing date for 2005 applications is **14 October**.

Introduction to Recombinant DNA Technology; and the EIBE CD on fermentation.

Traditional teaching methods are dominant in the university and I described alternatives such as using models and video tapes to facilitate the teaching and learning process, PBL, case studies and debating. I gave talks on biotechnology applications in medicine, agriculture, and pharmaceutical products and how Iraq can benefit from such applications given the status quo!

I delivered four seminars on various topics to different institutions, together with a general seminar on the current global efforts to restore the Hammar Marshes. I actually visited these marshes to witness the cooperative role between the indigenous people and the Marine Science Centre in the restoration process, which looks promising. A sample of marsh water was taken for microbiological testing.

The Technical College and Basrah Technical Institute suffered heavy losses during the war and I met their Deans and staff to see the ongoing efforts between them and the British authorities to rebuild and restore these institutions. They were very grateful for the co-operation of colleges in UK, the British Council and British authorities in the south for their dedicated work.

The Higher Education and Scientific Research Ministry in Baghdad expressed their keen interest in spreading this programme to other universities once the security situation improves.

The University Chancellor and Council invited me to a special dinner to thank me for my time at the university and presented me with an appreciation certificate and thank-you letters to SGM and my college. The feedback from the participants on the evaluation forms has put a huge moral responsibility on my shoulders to spare some time and share my knowledge with our deprived friends and colleagues. I found there is a great hunger to learn about new technologies. However, I should emphasize the risks involved, as security is on most Iraqis' minds, let alone those of people from abroad!

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Further information

See '*The poor condition and high hopes of university life in Basrah today*' at **http://www.public.iastate.edu/~mariposa/hamid1.htm**

◀ Students on the course and the current state of Basrah University. *Hamid K. Ahmed*