

International Training Program in Place to Build EHS Capacity Worldwide

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An issue of vital importance to the fields of occupational health and safety is the need to build global capacity through education and training. Many major multinational corporations and firms in the developing world are expanding into locations with limited inherent capability in the protection of workplace health and safety. In most countries, there is a shortage of adequately trained professionals, such as occupational physicians and nurses, occupational hygienists, ergonomists and other members of the occupational health multidisciplinary team. An effort is now underway at the international level to build EHS capacity through the establishment of training modules focusing on the development of basic practical skills. This article will discuss a proven and workable scheme of training modules currently in place and the continued collaboration and development needed to make the training more widely accessible and affordable.

Changes in industrial patterns in recent decades have shifted manufacturing and production from the developed world to emerging countries. In 2007, a study by Deloitte showed a strong demand from corporations for occupational hygiene in many developing parts of the world.¹ The survey found that the distribution of occupational hygienists is highly skewed toward member countries in the Organization for Economic Cooperation and Development (OECD) and English-speaking countries, particularly the USA, while at the same time potential growth is greatest in non-OECD countries. The survey also identified difficulties in many developing countries with recruitment and suitable training.

In an attempt to meet the challenges of recruiting qualified occupational safety and health personnel, in 2006 a number of occupational hygienists from multinational corporations produced a paper with ideas to address the capacity challenge and set out options to grow skills using a modular development program ("Discussion Paper on Industry Needs for Occupational Hygiene" October 2006). For several years, the International Occupational Hygiene Association ("IOHA") has been actively collaborating with the group of individuals who have been working towards the development of international occupational hygiene training and qualifications. Their proposals were presented and debated at OH conferences and workshops around the world including Australia, the United Kingdom, USA and Taiwan. The development scheme received feedback from the national occupational hygiene societies and the IOHA. Currently a proven and

¹ Deloitte (2007) *Health Management Information Benchmarking Survey - Findings & Observations*.
Deloitte Consulting LLP

workable scheme of training modules has been run in a variety of locations and include multiple language versions.

Initial funding of US \$250,000 was secured to develop a series of training courses that are now successfully in use in a number of countries. The group working on the international education and training has now established itself under English Law into the Occupational Hygiene Training Association (OHTA) and has formally signed a memorandum of understanding with IOHA, who has agreed to contribute some funds for the development of OHTA's website.

The process of developing course materials involves commissioning expert authors and peer reviewers. The draft material is then piloted and refined, reviewed, copyrighted, and published to a website or access by course providers. Companies such as BP have tried and tested basic modules on fundamental principles, which have been run in many countries including Australia, China, Indonesia, Singapore, Spain, South Africa, the UK and Vietnam. The modules are written by specialists with practical experience in the respective areas of occupational hygiene and are subject to peer review and copyright approval to make them suitable for translation.

The development of training modules focuses on providing a system of training and development that builds skills from a low base in a structured way. The modular training approach currently in place focuses on the development of basic and practical OH skills to identify, assess and control risk. To achieve higher qualifications, students build on basic knowledge in a spiral learning concept where learning at the lower levels is never wasted or repeated. Topics may be revisited at each level but with growing background knowledge and experience that allows for deeper insights. A series of modular courses have been developed to cover a range of occupational hygiene topics. The material includes student manual, course pre-read, slide packs, course notes, practical sessions, overnight student questions and exercises and pilot exams.

The traditional approach of sending trainees overseas is expensive and can only be used on a limited scale. The modular training concept provides a consistent format that can be deployed around the world, reducing costs and increasing the potential for local development. The challenge in developing countries is not only the lack of competent occupational hygienists but also the limited range of options to deliver training and development. The benefits of a modular concept for course delivery include the potential to train large numbers of individuals in a cost-effective way. In order to create a sustainable training program, training must be delivered locally and be both accessible and affordable in order to meet the needs of the organizations funding the training. Translation and delivery in local languages is a key element in the sustainability of the training programs.

The student assessment process has evolved from proposals developed by the British Occupational Hygiene Society Faculty of Occupational Hygiene and consultation with stakeholders. Students who successfully complete a module and pass an open book examination are given an Award of Satisfactory Course Completion recognizing their

understanding of the subject taught and ability to apply their knowledge to answer questions. They must complete a personal learning program and submit a portfolio of project work within six months of completing a course to receive an intermediate certificate of competence in that subject. Satisfactory award of six such certificates (four in mandatory modules and two in optional modules) will entitle the student to the full Intermediate International Certificate of competence in occupational hygiene.

The global occupational hygiene community continues to refine and expand the education and training programs in order to build EHS/OH capacity throughout the world. In October 2009 a workshop on education and training for capacity building in occupational safety and health was held in conjunction with the World Health Organization Network of Collaborating Centers in Occupational Health, providing an opportunity for participants to hear about country and regional efforts in education and training, discuss basic occupational health competencies and ways of promoting OHS disciplines. There were many discussions on the creation of a learning repository that would collate and organize relevant information on a "user-friendly" site to support a number of training activities in occupational health and safety. Training and education programs in South Africa, Benin, Baltic Countries, India, Thailand, Southern Africa and Afghanistan were presented at the workshop as well.

An increasing number of providers are now experimenting with the modules. For example, the American Industrial Hygiene Association (AIHA) is planning to pilot one of these modules (Hazardous Materials) in June 2010 in Shanghai. The module will be taught in Mandarin with course materials available in English.

Importantly, several occupational hygiene accrediting bodies, including the American Board of Industrial Hygiene, British Faculty of Occupational Hygiene, and the Canadian Registration Board of Occupational Hygienists have signed a memorandum of agreement ("MOA") pledging to work towards developing a common platform for the credentialing (accreditation or certification) of occupational hygiene technicians/technologists that achieves international acceptance and recognition.

The signatories to the MOA believe the concept of modular training at the intermediate level can effectively provide a structured system of training and skill development by which intermediate technical accreditation (credentialing) can be attained. These courses may ultimately be recognized by University level programs as credit toward a baccalaureate or masters degree.