

Environmental Health Teaching Strategies in an EFL Environment:
A Canadian Based Curriculum at the College of North Atlantic-QATAR

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Comparative analysis exercises challenge the student's minds to become critical, inquiry based, innovative thinkers. The challenge for the instructor is to motivate the student in becoming eventual change agents working in Environmental Health capacity building functions in the State of Qatar within the public service sector working primarily for the National Health Authority.

The Environmental Health Officer in any context (Qatari or Canadian) must be familiar with local law in its uses and application to enforce standards needed to become successful in their role as environmental health officers: as protectorates of both the natural and built environment.

Secondly, just as important is the health promotion function of the Environmental Health Officer's role in the prevention of disease conditions that may be spread through the natural and built environment. The building blocks of a comprehensive Environmental Health program model utilized in the State of Qatar resemble established core functions of Public Health in Canada established by an advisory committee on Population Health.

- Disease and Injury Prevention
- Health Promotion
- Health Protection
- Health Surveillance
- Population Health Assessment

Case in Point: How do I challenge the student to determine if the Food Premises regulatory framework in the State of Qatar is adequate to protect the public from the risks associated with foodborne illness throughout the food control system?

Classroom Activity and Evaluation Example:

A Comparative Analysis of the Food Control System (Canada and the State of Qatar)

The Activity:

- Examination of a current food control regulation in Canada(i.e. significance of definitions, locating sections, pertinent areas that provide risk based approaches to food control, embedded health promotion strategies inherent in the regulation, areas of the regulation that have an enforcement standard attached to it).
- Examination of current food control regulations in Qatar
- Comparative Analysis of Canadian and Qatari Regulation
- Evaluate the strengths/weaknesses of Qatari Regulation

- Identify the gaps/needs of the Qatari Regulation to improve evidence based practices in the areas of food safety (Inquiry Based Outcome)
- Report writing activity-Have the student prepare a document addressed to the Director of Preventative Health at the National Health Authority to identify, address gaps in the Food standard regulation in Qatar that fail to address evidence based approaches to environmental health protection.

(**The application of this teaching methodology can be used across many of the disciplines in Environmental Health Technology that have a regulatory framework to utilize inquiry based learner principles-air quality, water quality, communicable disease control are all examples)

The Environmental Health Technology Program-College of the North Atlantic-QATAR

The 3 year curriculum of the Environmental Health Program at the College of North Atlantic relies on several inputs to establish and develop the model for Environmental Health capacity building in the State of Qatar:

1. **Curriculum modeled from the Canadian Institute of Public Health Inspector's**- instructional objectives under sixteen major areas: air quality, waste management, water management, inspection, land management, environmental health assessment, administration, occupational health, communicable disease control, emergency preparedness, pest control, environmental health advocacy, lifestyle programs, investigation, research and reporting communications.
2. **Focus Groups**-Industry representatives in the field of Environmental Health lead the focus groups in identifying the job skills, requirements and rationale for the program based on Strategic National Qatarization Plan through an ongoing effort.
3. **Academic Council**-review and approval of program through the College of North Atlantic's headquarters in Newfoundland, Canada at the outset of program.
4. **Experiential Learning**-modeled after Canadian Institute of Public Health Inspectors field experience program working for a local health unit under the supervisor of a professional environmental health mentor for certification training. Certifying body for Environmental Health Officer's/Public Health Inspectors.Two professional Work Terms for Students in Semester 6 & 9(7 weeks of hands on experience in private and public sector, primarily with NHA sponsor. Alignment of preceptor from prospective employer and Work term coordinator at the College of North Atlantic for delivery. Report writing evaluations based on actual environmental health inspections.

Inspection and Investigation course-mock inspections performed of the natural and build environment with EH instructor. Briefing and Debriefing components.

The Views of the Environmental Health Officer:

The Environmental Health Officer-combines two ideas from two similar viewpoints and combines them:

1. The Definition of Health (World Health Organization)-“a state of complete mental, physical, and social well-being and not merely the absence of disease”
2. The Contextual Definition of the Environment
 - a. Build environment-man made surroundings that provide the surroundings for human activity. In the context of environmental health officers as examples-food premises, waste water treatment plants, water treatment plants.
 - b. Natural environment-i.e. potable water, recreational water, ambient air, etc.

Environmental Health combines these two ideas and advances the concept that what we do to our environment will impact public health. It also promotes the idea that prevention is the key to improving health and is cost-effective.

As a working example cost effectiveness analysis can be expressed in terms of water supply and sanitation interventions in controlling diarrhea among children under the age of 5 years which can be as cost effective as oral rehydration therapy. Relatively simple and cheap interventions such as hygiene education, regulation of drinking water and the monitoring of water quality. This can be measured in terms of US\$ per case averted or disability-adjusted life year saved. (Varley R.C., Tarvid J., Chao D.N., 1998)

Learner Profile of Students at College of North Atlantic-QATAR

- Primarily Nationals-73.8%
- Male to Female students -68% to 32%
- Co-operative education
- Sponsored Students 73%
- Health Sciences Students-comprise 15.6% of academic group(Business, Engineering, Industrial Trades more predominant)

Source: College of North Atlantic Institutional Research Office 2007

- Environmental Health Students are primarily sponsored by the National Health Authority, Ministry of Municipal Affairs and Agriculture and a small number with oil/gas companies.

Standardized entrance test for Math and English for entrance and placement in pre-program stream-EFL and Academics

Other strategies to develop the learner profile of Environmental Health Technology Students being introduced at the College of North Atlantic-QATAR

Development of English for Specific Purpose Program.

Purpose of ESP program: Develop a bridge between EFL and placement into curriculum of Environmental Health program and other Health Sciences programs with the emergence of a pilot project beginning in September 2008 with the role out of an English for Specific Purpose program (ESP) to supplement EFL program.

Program activities-integrate broad based allied health sciences vocabulary progressively into EFL courses

Needs analysis conducted by Health Sciences Committee at the College of the North Atlantic-QATAR with the Institutional Research Office comprised of student survey, faculty survey and classroom observations to address learning challenges.

Mandate: develop a strategy to better address the specific language needs of students

References:

- E. Bragg-(Personal Communication March 10, 2008)
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- Varley R.C., Tarvid J., Chao D.N., (1998). A Reassessment of the Cost-Effectiveness of Water and Sanitation Interventions in Programs for Controlling Diarrhoea. *Bulletin of the World Health Organization* 76(6): 617-31.