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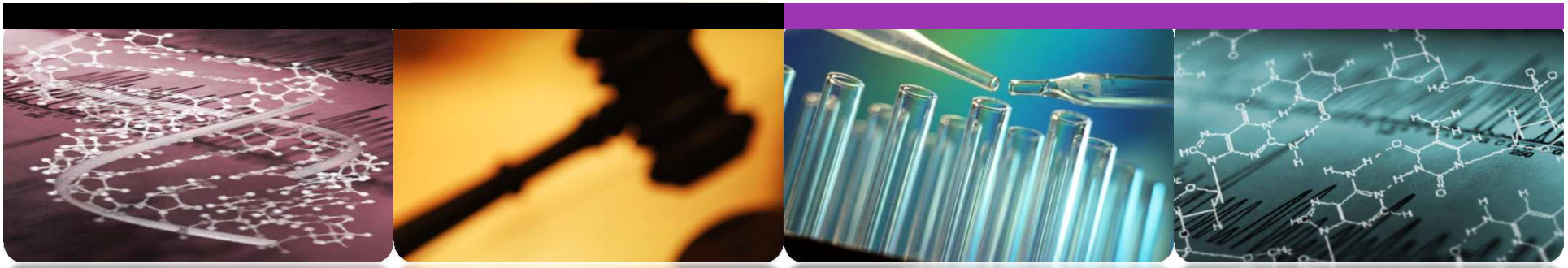
MAKING KNOWLEDGE WORK

School of Social & International Studies

Security Education for Scientists?



Malcolm Dando

Bradford Disarmament Research Centre (BDRC)

1. RC-3/DG.2

- *Education and outreach in science and technology*
  - The Director-General agrees with the SAB that education is a crucial element….the Third Review Conference
  - Could recommend that increased efforts be made nationally, regionally, and internationally to ensure that all those engaged in chemistry are aware of the Convention and its prohibitions and obligations.

2. BTWC Review Conference 2011

- *BWC/CONF.VII/WP.20/Rev.1*
  - While the existence of a well-developed sense for aspects related to (bio-)safety among students and practicing life scientists has been repeatedly confirmed, **there is, in general, a limited level of awareness of the risk of malevolent misuse of the biological sciences**.
  - **Existing curricula and/or training at university or research facilities do often contain references to aspects related to (bio-)safety, but rarely contain any aspects related to (bio-)security.**

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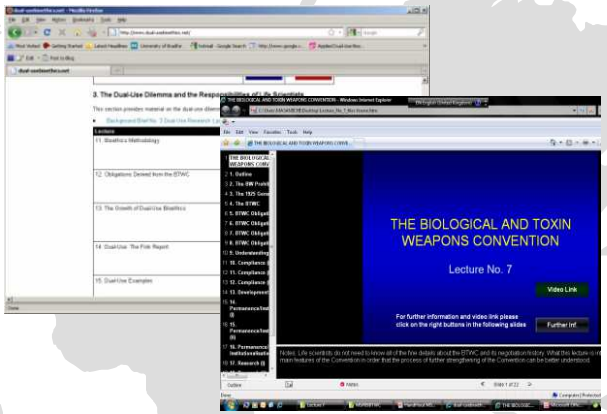
IWG-LNCV

National Defense Medical College

3. How can education be delivered?

Education Module Resource (EMR)



http://www.brad.ac.uk/bioethics/educationalmoduleresource/

A free (open-source/shareware) on-line educational resource

- Threats of BW and terrorism (Lectures 1-Intro, 2-10)
- Responsibilities of life scientists (Lectures 11-18)
- National implementation of the BTWC (Lectures 19-20)
- Building web of preventive policies (Lecture 21)

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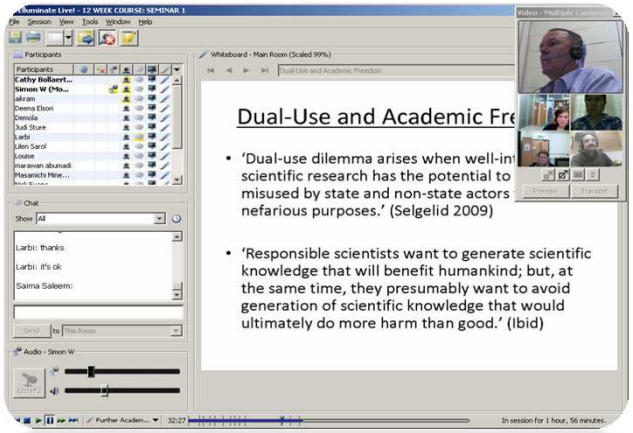


4. Next Steps 1: Applied Dual-Use Biosecurity Online Distance Learning Course

http://www.brad.ac.uk/bioethics/trainthetrainer/30creditbiosecuritymodule/

Train the Trainer Programme

BIOSECURITY ENGAGEMENT PROGRAM

- Virtual classroom (PPTs, Webcam, Audio equipment),
- 20 Credit Course (UK Higher Education Master's level credit): 12 Lectures and 12 seminars in 12 weeks (1.5 hours weekly);
- Certificate Course: 6 lectures in 6 weeks

5. Next Steps 2: National Series: Former Soviet States and The Middle East

Immediate introduction of short educational courses in specific countries

1. Developing country-specific educational material,
2. Organising seminars with local contacts,
3. Facilitating biosecurity experts networks,
4. Monitoring, and
5. Reporting to the BTWC

6. Next Steps 3: Neuroscientists

- *Workshops on Education*
  - 2012-2013
  - Present State
  - Ideal State
  - Filling the Gaps?
  - Getting there from here

Institution of Science Ethics and Innovation,
University of Manchester, UK.
(John Sulston, Sarah Chan, Catherine Rhodes)

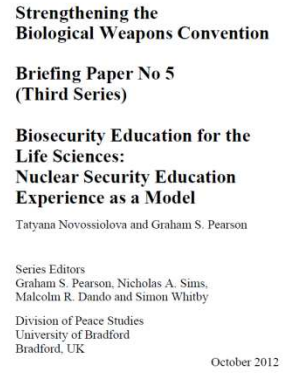
NETWORK euroscience ethics eaching

Making ethics teaching in neuroscience work

7. Next Steps 4: Active Learning

8. What is missing?

State-level actions are needed for a real change



Strengthening the Biological Weapons Convention

Briefing Paper No 5 (Third Series)

Biosecurity Education for the Life Sciences: Nuclear Security Education Experience as a Model

Tatyana Novossiolova and Graham S. Pearson

Series Editors
Graham S. Pearson, Nicholas A. Sims, Malcolm R. Dando and Simon Whitby

Division of Peace Studies
University of Bradford
Bradford, UK

October 2012

9.The Ways Forward

Novossiolova and Pearson (2012) Biosecurity Education for the Life Sciences: Nuclear Seucrity Education Experience as a Model, *Bradford Briefing Paper* No.5. Available from: http://www.brad.ac.uk/acad/sbtwc/briefing/3_BP_5.pdf

Lessons and Implications from the IAEA

- The IAEA: The International Nuclear Security Education Network (INSEN)

10. Bradford Disarmament Research Centre

- Simon Whitby
- Malcolm Dando
- Judi Sture
- Masamichi Minehata
- Tatyana Novossiolova
- Gerald Walther