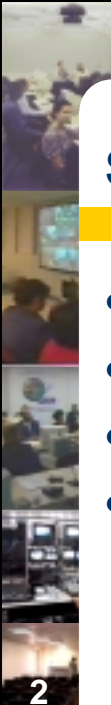




## Capacity Building for Air Quality Management in Asia: The Role of Distance Learning

Paul Procee  
World Bank Institute  
Better Air Quality  
Workshop 2002  
Hong Kong

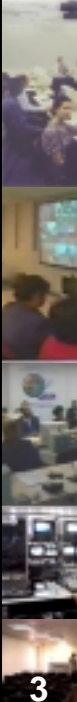
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## Summary

- Distance Learning
- The World Bank and Distance Learning
- The Clean Air DL program
- Conclusions

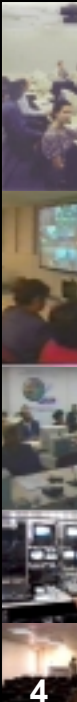
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## What is Distance Learning?

- Distance learning takes place when an instructor/teacher and participants/student(s) are separated by physical distance
- Technology (i.e., voice, video, data, and print), often in concert with face-to-face communication, is used to bridge the instructional gap

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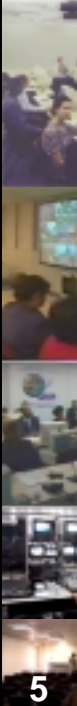


## Is Distance Learning Effective?

**As effective as traditional instruction, if:**

- Method and technologies are appropriate to the instructional tasks
- Participant-to-participant interaction
- Timely instructor-to-participant feedback

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## How is Distance Learning Delivered?

- **Voice:** Audio- or teleconferencing (two-way), tapes and radio (one-way)
- **Video:** Videoconferencing (two-way), videotapes, television, and still images such as slides (one-way)
- **Data:** Computer based tools: CD-Rom, websites, email, discussion forums, ListServes (one-way and two-way).
- **Print:** textbooks, study guides, workbooks, course syllabi, and case studies

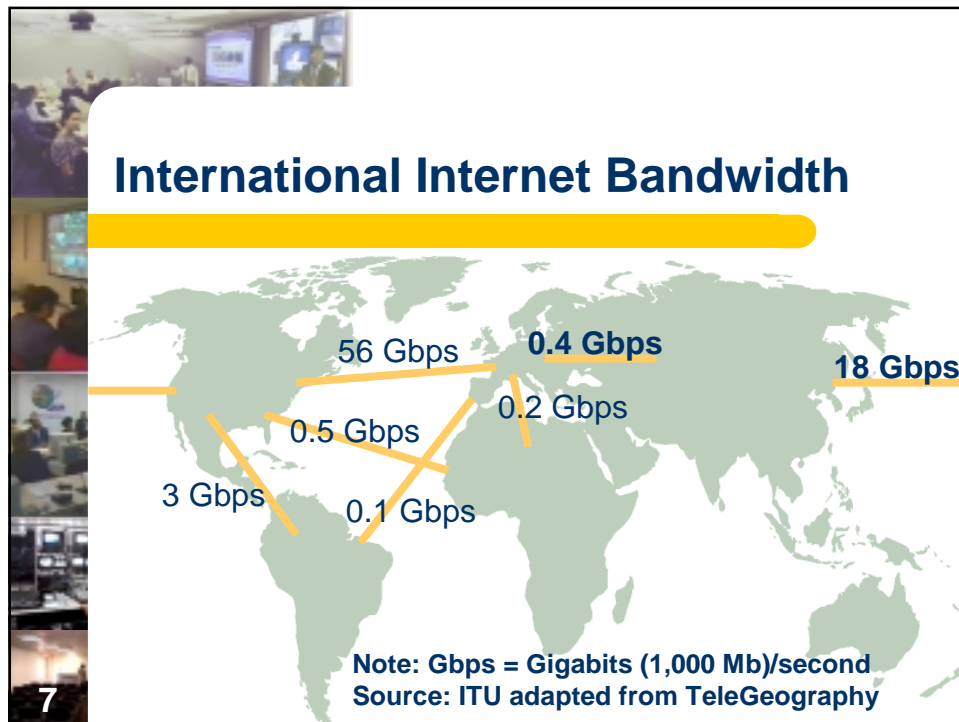
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## Key Players in Distance Learning

- **Participants** - Meeting the instructional needs of students is the cornerstone of any effective program
- **Instructors** - Assembling course content and developing an understanding of student needs
- **Facilitators** - Bridge gap between the students and the instructor. Must understand the students and the instructor's expectations
- **Support Staff** - Glue to keep everything together and on track. Functions include student registration, materials duplication and distribution, facilities scheduling, processing grade reports

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- ## Capacity Building and DL: What is the World Bank Doing?
- Clean Air Initiative: [www.worldbank.org/cleanair](http://www.worldbank.org/cleanair)
  - World Bank Institute: [www.worldbank.org/wbi](http://www.worldbank.org/wbi)
  - Knowledge Bank: [www.worldbank.org/knowledgebank/](http://www.worldbank.org/knowledgebank/)
  - Global Development Learning Network: [www.gdln.org/](http://www.gdln.org/)
  - Knowledge Sharing Network: [www.worldbank.org/ks/](http://www.worldbank.org/ks/)
  - The Global Development Network: [www.gdnet.org](http://www.gdnet.org)
  - Global Development Gateway:  
[www.worldbank.org/gateway](http://www.worldbank.org/gateway)
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## Why Distance Learning on Air Pollution in Asia?

- Air pollution is growing problem in many cities, including secondary cities
- Many cities are facing a problem and important lessons learned are available
- Technology is widely available and used in Asian cities, and connectivity increasing rapidly
- Cost-effective way to reach a broad audience and create community of practice
- Content from a wide range of sources
- Reach a critical mass of participants to effect change
- **Not replacing face-to-face instruction!**

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## The Urban Air Quality Management Distance Learning Course

1. Introduction to the course
2. Air Quality Monitoring, Sources and Raising Awareness
3. Integrated Air Quality Analysis and Modeling
4. Indoor Air Pollution
5. Health Impacts and Valuation
6. Policies Instruments and Institutional Framework
7. Prevention and Control of Transport Emissions
8. Prevention and Control of Industrial and Energy Emissions
9. Regional and Global Air Pollution
10. Integrated Local Air Quality Plans

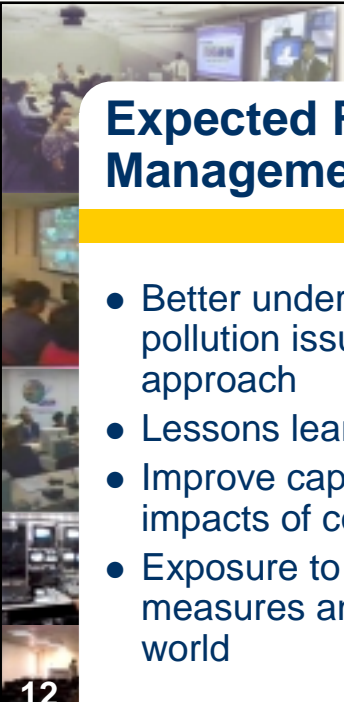
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## Target Group

- Government officials
- Technical staff from local government agencies
- Local consultants
- University staff
- NGO Representatives

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## Expected Results of the Air Quality Management DL Course

- Better understanding of the complexity of air pollution issues and the need for an integrated approach
- Lessons learned: south-to-south dialogue
- Improve capacity to evaluate the origin and impacts of contamination
- Exposure to the application of technical measures and policies in cities around the world

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- ## What Will the World Bank Offer?
- Pre-recorded 2-hour videotapes covering the basic issues of the module, including some case-studies
  - Website with presentation, reading materials, discussion forum and feedback and evaluation tools
  - Facilitators guide, including syllabus, list of suggested local activities
  - CD-Rom (copy of the website)
  - Facilities for videoconference (**on demand**)
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## What is Expected from Partners?

- Assist participants and facilitate local interactions and feedback to instructors
- Facilities for watching videos and group discussions, and access to computer/internet
- Develop and enhance existing materials with locally relevant information/case-studies
- Review and adapt suggested activities as desired
- Ensure participant provide regular feedback and submit **all** evaluation forms
- Marketing of the course in Asia

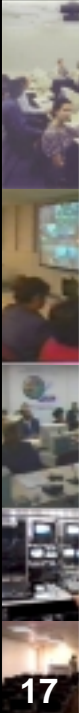
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## Why Participate?

- Sharing of knowledge and experience of leading institutions on air quality management
- Lessons learned – good and bad –to avoid making the same mistakes
- Help improve decision making
- Access to information and expertise
- Become part of a local and international community of specialists and professionals

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**Conclusions:  
Distance Learning...**

- ...can be a very effective education tool and for sharing of experiences from many sources
- ...uses mix of technologies, preferably in combination with local 'live' interactions
- ...is a good option in well connected urban areas in Asia (connectivity is increasing rapidly)
- ...helps built local, regional and international communities of practice
- ...does not replace face-to-face training!

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