Teaching GIS in Central Asia

Navigating the Future of Survey Education

Educational Network

26 – 28 February, 2009
Vienna - Austria

Experiences

Bishkek

• 2nd Central Asia GIS Conference
• GIS for the future of Central Asia
• Initiation of Austria-Central Asia Centre for GIScience

Experiences

• English language problems of Central Asian participants
• Lack of GI-knowledge and technology
• Barely financial background for scientific projects

Initiation: Head of Kyrgyz university and Austrian ambassador in Central Asia
Participants of 2nd GISCA'08

Experiences Kathmandu

• “Train-the-trainers” Workshop
  - Geoinformatics for Mountain Environment Management (mountainGIS)
  - organized by ICIMOD
  - Topics covered by TUG:
    • Forest Growth Modelling
    • Forest inventory

• Experiences:
  - Commercial GIS do not have a sustainable learning effect – no license at home!
  - Maintain balance: theory ↔ practice
• Initiate “sustainable” learning
  - Profound theoretical background
  - Know-how to apply theory to “real-world” problems
  → Problem Based Learning (PBL) (e.g. Kopp & Mandl 2002, Car 2004)

• Instructional vs. constructivist view
  - Learner has active position
  - Frontal lessons have a minor role
  - Process of learning is a social process
  → Overcome the creation of inert knowledge

• The “perfect” PBL environment (Reinmann-Rothmeier and Mandl 2001)
  - Authenticity and reference to application
  - Multiple contexts and perspectives
  - Social learning arrangements
  - Work in groups

• PBL means a balanced combination of instructional and constructivist view

• Teaching GIS in CA:
  - Work on problems related to the region increases student’s interest
  - Focus on applying theory in projects and “learning by doing”

• TeachCenter
  - Learning Platform
  - Administration
  - Communication
  - Data exchange for lecturer and participants
  - Evaluation function (e.g.: multiple choice test)

• LearnLand (TU Graz)
  - Web space for blogging
  - Documentation of lab and project work
  - Social networking
Introduction
Experiences
Teaching GIS
Infrastructure
openSolarGIS
Outlook

• Project Proposal openSolarCA’09
  - Satellite workshop to GISCA’09
  - Potential lecturers
    • ÖAW, TU Graz, TU Wien, Uni Graz, Uni Klagenfurt, BOKU, FH Joanneum, FH Kärnten, …
  - Planned Modules (interdisciplinary)
    • FOSS GIS, power supply, solar energy, solar technologies, project work, …
  - Possibly funded by Eurasia Pacific Uninet
    (Proposal evaluation result: end of March 2009)

OUTLOOK & MOTIVATION

Future initiatives
• Projects for social benefit
  - e.g. openSolarGIS
• Central Asians contacts to Western Europe
  - e.g. GISCA ’09

Support of
• Sustainable development of Central Asian countries
• Protection and conservation of nature

Central Asian – European contacts
Conservation of nature
Teaching GIS
in Central Asia

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