

Finland

(571)

UNITWIN/UNESCO Chairs Programme

Progress Report

Period of activity: 2005

UNESCO Chair in Global E-Learning with applications to multiple domains

Host institution: University of Tampere

Report established by: Professor Tapio Varis, Chairholder

I. Activities

1. Academic activities

Doctoral seminar and Masters programme, University of Tampere, Finland

New Media, Communication and Peace in the Global Knowledge Society, 5 study points (3 Finnish credits). University of Helsinki, Finland

Masters seminar in communication studies, University of Helsinki, Finland

2. Conferences/Meetings

Meeting of UNESCO Baltic Sea Subregion Education for All (EFA) Coordination Working Group, St. Petersburg, Russia, 15-18 January, 2005

Microsoft Government Leaders Forum-Europe, Prague, January 31-February 2, 2005, Background ideas for Session: Discussion Forum I - Track A: Employment and Social Inclusion, Education and e-Skills in a Knowledge-Based Economy

“Information and Communication Technologies for Capacity-Building: Critical Success Factors, UNESCO & Club of Rome World Conference, Paris 10-14 May, Moderator of the Latin American Sessions

“e-Learning and higher education,” eLearning Conference “Towards a learning society”, Brussels 19-20 May

“Media Skills and Competence” Conference, Tampere, 26-27 May, Co-Chair and research director (including world-wide videoconferencing)

“Challenges of Learning Society”, LETTET Conference, University of Joensuu, Savonlinna 3-5 August, Keynote presentation

“e-Learning, Corporate Competence, and Higher Education,” UNESCO – UNEVOC International Seminar “Vocational Content in Mass Higher Education: Responses to Challenges of the Labour Market and the Work-Place”, Bonn 9-10. September 2005

“Catalyst” Conference, Arts Council of the UK, Manchester 15-16 September, Keynote presentation

Media and e-Learning Skills and Competences, Wien 21, Austria October 2005, Keynote presentation

World Summit on the Information Society, Tunis 14-19 November, UNESCO Chair Session and participation in UNESCO Session. Also presentation on a session on Nov 18th was related to "Media Education Beyond Tunis And Within E-Learning " with the following panellists: Tapio Varis, Unesco Chair E-Learning, Mustapha Ennaifar, Cenaffe, Janique Landouar, Numedia-Edu, Abdelkarim Hizaoui, Ipsi

Expert on Higher Education Evaluation, Council of Higher Education, South Africa, 27 November – 2 December, South Africa

University of Tartu, Estonia, Evaluation of Candidates for the Position of Professorship in Educational Technology , 26 November 2005

Conference on “African Research and Education Networking Infrastructure” of Association of African Universities, November 14 and 15, 2005, Tunis, Tunisia
<<http://www.aau.org/tunis/>>

Following UNESCO Forums at the World Summit on Information Society (WSIS-II), November 16 and 18, 2005, Tunis, Tunisia;

- High Level Round Table Forum; “Shaping the Future through Knowledge,” (November 17th) and
- “The Role of UNESCO in the Construction of Knowledge Societies through the UNITWIN/UNESCO Chairs Program,” (November 18th)
- ELeGI conference in Vico Equense, Italy, March 14 to 16, 2005. Dr. Utsumi was invited to this conference, since he has been appointed as a Scientific Advisory Board member of this ELeGI consortium of about a dozen prominent universities in Europe.
- 1st International ELeGI Conference <<http://www.elegi.org>> on Advanced Technology for Enhanced Learning Hotel Oriente, Vico Equense - Napoli (Italy) from 14th to 16th March 2005 <http://makeashorterlink.com/?T198618CA>

Videoconferencing

May 26, 2005: We held a multicasting videoconferencing with the following participants and discussed global e-learning at the occasion of the Conference on “Knowledge Society Challenges for e-Learning” at the Kaunas University of Technology in Kanaus, Lithuania and of the Conference on “Media Skills and Competence” at University of Tampere, Finland;

- CorStar, Inc., New York,
- Green Sphere, Inc., New York,
- Houston Community College, Texas,
- Kaunas University of Technology, Lithuania,
- Taganrog State University of Radio Engineering, Russia,
- University of Helsinki, Finland,
- University of Tampere, Finland.

The recorded video of this event is now available at <http://www.cs.helsinki.fi/u/andberg/video/GUS/>

With the success of the above, we have been invited to participate in the “Increasing Empathy Through Video Conference” of Ohio State University <http://www.megaconference.org>, which will gather more than 415 participants around the world, which is probably the largest megavideoconference attempting only through the use of broadband Internet — without any use of satellite dish antenna and viewing videoconferencing room, etc.

“Electronic Global University System and Services”

http://www.friends-partners.org/GLOSAS/Bookwriting/Contents_of_Book.html

Satellite approach was too expensive for regular use. In contrast to it, videoconferencing with H323 protocol takes the advantage of SHARING feature of packet-switching telecom, i.e. Internet, thus bringing drastic cost reduction.

We plan to use this kind of videoconferencing system on a regular basis along with the Global University Phone System <http://www.aboutreef.org/GUPS> and Access Grid <http://www-fp.mcs.anl.gov/fl/accessgrid/default.htm> through Global Broadband Internet among member institutions (educational and healthcare) of GUS/UNESCO/UNITWIN Networking Chair programme.

3. Inter-university exchanges

- Organization of a visit by Brazilian academic delegation from Centro Universitário Feevale, Feevale 6-9 April
- Research planning meeting with Dr. Margarita Pavlova, St. Petersburg, Russia 8-10 October
- Videoconference to the Taganrog State University of Radio Engineering, Russia, 12 December

- Videoconference to Bogota, Colombia 19 December, <http://www.karisma.org.co/conversatorio2005>
- Keynote speeches in national conferences in Finland

Missions

- InfoPoverty Meeting at UNDP in New Cork, May 13, 2005 Presentation about Global University System by Dr. Utsumi
- Opening speech at the annual conference of the American Society for Cybernetics (AAC), Washington, D.C., October 28, 2005 <<http://www.asc-cybernetics.org/2005/index.htm>>
- Following UNESCO forums at the World Summit on Information Society (WSIS-II), November 16 and 18, 2005, Tunis, Tunisia;
 - i. High Level Round Table Forum; “Shaping the Future through Knowledge,” (November 17th) and
 - ii. “The Role of UNESCO in the Construction of Knowledge Societies through the UNITWIN/UNESCO Chairs Program,” (November 18th)

GUS/Malawi

- PowerPoint Presentation by T. Utsumi, [At Permanent Mission of Malawi to the United Nations](#)
- Concept Paper: "**The Establishment of Maravi-Net (MARNET) and Local Community Development Networks (LCDNs) for E-learning and E-healthcare in Malawi**"
[Application for Japan Social Development Fund \(JSDF\)/Seed Fund](#)

GUS/Nigeria

- PowerPoint Presentation by T. Utsumi [Nigerians In Diaspora Organization \(NIDO\)/Americas Professional Summit in Flushing, NY on 4/27/02](#)
- Filled questionnaires for Importing E-Learning Courses from Developed Countries, Abia University Teaching Hospital (Dated on November 1, 2004) ([MS/WORD file, 84 KB](#))
- Oji, D. E., T. Utsumi and C. Uwaje, "**International Centers of Excellence for e-Health in Africa with Global University System in Nigeria,**" Paper published in the eHealth International Journal, International eHealth Association (IeHA), University of Michigan Health System, September 25, 2005

The initial focus of this project is on the Prevention of Mother-to-Child HIV/AIDS Transmission in Nigeria and to cope with the severe doctor shortage in African countries by bringing advanced continuing medical education from prominent American medical schools, e.g. the University of Michigan Health System and Harvard University Medical School, etc.

Medical errors account for about 2 million deaths in Africa. Majority of these deaths occur in rural areas, mostly among children and women. Nelson Mandela suggested that “giving life is NOT to die,” in referring to the fact that almost 300,000 women die during childbirth annually in Africa.

GUS/Ethiopia

- Project Proposal (Draft: 12/27/03) "**The Establishment of ICT-Center and Local Community Development Networks (LCDNs) for E-Learning and E-Healthcare in Ethiopia**"
[Application for Japan Social Development Fund \(JSDF\)/Seed Fund](#)
- "[International Symposium on ICT Education and Application in Developing Countries](#)," October 19-21, 2004, Addis Ababa, Ethiopia
- Takeshi Utsumi, Tesfaye Teshome and Berhanu Beyene
"[Establishing Global University System in Ethiopia \(GUS/Ethiopia\)](#)"

Similar activities are now being formulated in Kenya, Mozambique, Sierra Leone, Philippines, Cambodia, etc., and we received inquiries to join in our GUS from many other developing countries.

The outcome of the workshops in those countries will be a comprehensive project proposal to combine (1) the Japanese government's Official Development Assistance (ODA) funds and (2) Japanese electronic equipment with (a) the Internet technology and (b) content development of North America and Europe, to help underserved people in rural and remote areas.

In December, an initial talk on a joint work was held at Stevens Institute of Technology in New Jersey, which is now practicing the extension of their courses to Beijing Institute of Technology. They want to work with us for their project in Zambia with a possible fund from the UNDP in South Africa, and for our projects mentioned above.

II. Forthcoming activities

Since Dr. Utsumi initiated the concept of GRID networking technology in 1972 [6], he has been working on the following interwoven projects;

- Global University System (GUS) [1], [2],
- Globally Collaborative Environmental Peace Gaming (GCEPG) [3],
- Globally Collaborative Innovation Network (GCIN) [4].

The GUS is a worldwide initiative to create advanced telecom infrastructure for accessing educational resources across national and cultural boundaries for global peace. The aim is to achieve "education and healthcare for all," anywhere, anytime and at any pace.

The GCEPG conceived by Dr. Utsumi in the 1972 as a globally distributed computer simulation system, is a computerized gaming/simulation to help decision makers construct a globally distributed decision-support system for positive sum/win-win alternatives to conflict and war. The idea involves interconnecting experts in many countries via the

global Internet to collaborate in the discovering of new solutions for world crises, such as the deteriorating ecology of our globe, and to explore new alternatives for a world order capable of addressing the problems and opportunities of an interdependent globe.

The GCEPG is to train would-be decision makers in crisis management, conflict resolution, and negotiation techniques with a globally distributed socio-economic-environmental computer simulation system in various countries through a GRID computer network – see Figure 2 of Reference [3]. GUS' in various countries are to supply tech support, modelers, and gaming players to this GCEPG project. GUS' in developing countries assist K-12 education with GCEPG to train would-be leaders for understanding interwoven world phenomena with rational analysis and critical thinking.

We consider the simulations as fundamental aspects for implementing experiential based and contextualized learning approaches. GCEPG project could be a complete and powerful demonstrator of ELeGI Project, which was mentioned above, to show (1) the advantages coming from using advanced technologies (i.e., GRID for accessing to computing resources and collaboration environments) for supporting simulations execution, data analysis, etc., and (2) simulations for learning through the definition of innovative pedagogical models (i.e., socio-constructivist contextualized learning approach), and (3) to show all the benefits coming from the harmonized and synergistic use of advanced technologies together with innovative pedagogical models for learning, i.e., ELeGI.

The following organizations have indicated their strong interest in participating in our GCEPG project;

- Millennium Institute
<<http://www.millenniuminstitute.net/>>
- Research Committee 51 (RC51) of the International Sociological Association (ISA)
<<http://www.unizar.es/sociocybernetics>>
- Trans-European Research and Education Networking Association (TERENA)
<<http://www.terena.nl>>
- GLORIAD
<<http://www.gloriad.org/>>
- McLeod Institute of Simulation Sciences (MISS)
<<http://www.simulationscience.org/>>
- The Club of Rome
<<http://www.clubofrome.org/>>
- Prof. Onishi in Japan with Futures of Global Interdependence (FUGI) model, the world largest econometric model, and many others.

The Millennium Institute in Arlington, VA has indicated their willingness to participate in this project with their national system dynamics models of Bangladesh, China, Ghana, Guyana, Italy, Malawi, Somaliland, Tunisia, and the United States. They also indicated that their institute would be willing to be the global center of our GCEPG project, as firstly organizing a planning workshop at the Institute as soon as we confirm a fund from the joint European Commission/National Science Foundation funding program. This is because Dr. Utsumi is one of the Scientific Advisory Board members of the European Learning GRID Infrastructure (ELeGI) Project, which has already been funded by the European

Commission with about USD 6 million. The ELeGI hopes to make this GCEPG a powerful demonstration of their project, too.

Incidentally, this project was the second contender to the Fifth Generation Computer Program of the Japanese government (USD 500 million for 10 years) about two decades ago. Dr. Utsumi rekindled this in late 1990s and resulted to the Japanese government's pledge of US\$15 billion during the Okinawa Summit in July of 2000 to close the digital divide in developing countries and for the eradication of poverty and isolation. During the G8 Summit in Canada in June of 2002, and at the Environment Summit in South Africa in September of 2002, they also pledged another US\$2 billion to aid education and healthcare in developing countries, respectively. They are now available through the Japan Social Development Fund at the World Bank, Japan Special Fund at the Inter-American Development Bank, Japan Fund at the Asian Development Bank, etc. The Japanese government is now doubling their aid particularly to African countries, especially to help their education and healthcare. After solidifying our GCEPG project between the US and Europe, Dr. Utsumi plan to re-approach to the Japanese government.

The GCIN is an extension of GCEPG and will foster creativity of youngsters around the world. Researchers in developing countries can co-work with colleagues in advanced countries to perform joint collaborative research with use of virtual laboratories for experiential/constructive learning and creation of knowledge through the global GRID technology, thus forming GCIN.

Since early 1970s, Dr. Utsumi pioneered the closing "digital divide" with substantial time, effort and private fund as extending U.S. data telecom to Asian countries, particularly to Japan, and made de-regulation of Japanese telecom policies for the use of email, and demonopolization and privatization of Japanese telecom industries, which have been emulated in other countries with over one billion email users around the world nowadays. American and other countries' university courses now reach many developing countries.

Dr. Utsumi then received the Lord Perry Award for Excellence in Distance Education in 1994. Two-year senior of the award was Arthur C. Clarke, the inventor of satellite.

We envision to inter-link GUS consortium member institutions in various developing countries, which will affiliate with GUS/UNESCO/NETWORKING Chair Program at the University of Tampere, through broadband Private Virtual Network to conduct megavideoconferences as well as GUS, GCEPG, and GCIN projects.

III. Development prospects

European Learning GRID Infrastructure (ELeGI) Project [5], [Allison, et al, 2003], which is now funded by the European Commission, aims to design and implement advanced service-oriented GRID-based software architecture for learning. This project will develop a new paradigm focused on knowledge construction using experiential based and collaborative learning approaches in a contextualized, personalized and ubiquitous way. This will replace the current information transfer paradigm, which is based on content, and on the key authoritative figure of the teacher who provides information.

Publications

Uusrenessanssikasvatus, digitaalinen osaaminen ja monikulttuurisuuteen kasvaminen. Tapio Varis (toim.), Helsinki: Okka-säätiö, 2005.

eLearning in Higher Education. International Journal of Mobile Learning and Organization (Forthcoming 2005).

Globaali Yliopisto ja rauha, Kosmopolis, Vol 34: UV60/2004, p.151-158

Digital Literacy and e-Learning in the Global University. Teoksessa "Ammatti ja kasvatus - ammattikasvatuksen tutkimuksia vuonna 2004." Toim. Markku Tuominen & Jari Wihersaari. Hämeenlinna 2005. S.275-295.

The Use of Information and Communication Technologies to Promote Community and Sustainable Development, Universidad Veracruzana, Xalapa, Mexico, published in http://www.tukkk.fi/tutu/Julkaisut/pdf/ffrc_publications_6_2005.pdf

"Towards a New Digital Learning Culture", in "eReflections – Ten Years of Educational Technology Studies at the University of Oulu. Essays contributed by the network builders," edited by Juha Pohjonen, p.99-108, <http://herkules oulu.fi/isbn9514276329>

"Global E-learning from a Finnish Higher Education Perspective," in

"E-Learning in Europe – Learning Europe", edited by Ullrich Dittler, Helge Kahler, Michael Kindt & Christine Schwarz, Munster 2005, p.95-110.

"E-oppiminen ja kirkon missio", in "Trendi, brandi ja evankeloumi," edited by Kalle Vaismaa, Jyvaskyla 2005, p. 136-146.

Introduction to "Viestintää jo vähän kaikki" by Jyrki Pietilä, Tampere 2005

Tapio Varis - Takeshi Utsumi - William Klemm (Eds.) "Global Peace Through The Global University System" University of Tampere, Finland, 2003 ISBN 951-44-5695-5

The entire contents of this book can be retrieved at <http://makeashorterlink.com/?M2D252E09>

Takeshi Utsumi, P. Tapio Varis, and W. R. Klemm "Creating Global University System," 2003

<http://makeashorterlink.com/?I2F231019>

Takeshi Utsumi "Globally Collaborative Environmental Peace Gaming (GCEPG)," 2003

<http://makeashorterlink.com/?E1D121E09>

Takeshi Utsumi "Global University System with Globally Collaborative Innovation Network," 2005

<http://makeashorterlink.com/?W2F412E1B>

Allison, C., et al, (2003), "Human Learning as a Global Challenge: European Learning GRID Infrastructure," Global Peace Through The Global University System, University of Tampere Press, Tampere, Finland <http://makeashorterlink.com/?Z1D031A39>

European Journal of Engineering Education, September, 2005

Takeshi Utsumi "Global University System for Engineering Education in the Age of Globalization"

<http://makeashorterlink.com/?A1FD2633C>

Paper for the forthcoming publication "Communication and Learning in the Multicultural World" by the University of Tampere, edited by Pekka Ruohotie, to celebrate the 60th birthday of the GUS Acting President Tapio Varis in June 2006

Takeshi Utsumi "Global E-Learning for Global Peace with Global University System"

<http://makeashorterlink.com/?Q5512436C>

Takeshi Utsumi "Global University System with Globally Collaborative Environmental Peace Gaming Project" <http://makeashorterlink.com/?O6D01210B>

Takeshi Utsumi "Global E-Learning for Global Peace"

<http://makeashorterlink.com/?F44621BDB>

Multimedia materials

As was described in the Annual Report of 2003 of the Chair, the main activity of the Chair has been to create the Global University System (GUS) and build the network for this project.