

CMGT 582- Communication for International Development

Spring 2010, KER101; Monday 6:30pm

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Course description: This course builds on two main concepts:

Development: We are usually quick to note that we live in a global communication landscape, but we all too often do not pay enough attention to the fact that 82% of this world is living in conditions that are quite different from ours: the developing world. Half of the human population lives with less than US\$2.50 per day, making that a monthly income of less than US\$75 for every second member of our global information society. This does not only matter for those who are poor, but shapes the global communication landscape as a whole. We still start with reviewing the multiple dimensions of development. We will discuss questions like: Is poverty merely a matter of economic well-being? What are the driving forces behind development? What are the dynamics and interplay between developed and developing societies? What is the international community (like the United Nations, World Bank, global NGOs) doing about it? We will spend most time discussing the question: What is the role of communication as a building block for the development of a society?

Digital innovation: At the same time, the introduction of digital ICT (Information and Communication Technologies) changes the lives of all people around the globe (directly or indirectly). Our generation of communication students has the luck (or responsibility) to live through and shape an era in which information and communication have become the driving force of human progress. ICT are the most powerful and also the most tangible tool to exploit the ensuing opportunities. We will start with reviewing the theories of innovation, technology and social change. We discuss questions like: What is the nature of technology and how does it evolve? What are the characteristics of the ongoing digital revolution? Where are ICT evolving from here? How do they already affect the lives of those living in poverty and what role can ICT play in development? What about differences and interdependencies between developed and developing nations? What are the limitations, threats and perils? What works and what are the costs?

Class structure: This is a seminar. Formal lectures will review the readings, but the focus is set on open class discussions based on the readings and projects generated by students. During the first 7 weeks we will review the theories and dynamics of both key concepts: development and digital innovation. During the remaining 10 weeks, students select and deepen their understanding of a specific topic that crosscuts both concepts. This might include topics like: e-education, e-literacy, e-health, e-business and management, e-government, e-agriculture, capacity building, gender, future technologies, innovation systems, open source, legislation, freedom of speech, property rights, pilot and best practice projects, environmental management, NGOs, global networking, United Nations, global governance, development aid, poverty reduction strategies, disaster management, public policy, trade, agenda setting, culture, happiness and quality of life, among others.

Course requirements:

In-class participation: Students are expected to make informed contributions to class discussions and activities. This includes preparing questions and contributing to the class discussion based on the reading material. Grade percentage: 20%

Class presentation: Students will select one topic in which they give a presentation of the most relevant literature, key concepts, state-of-the-art and current challenges. Grade percentage: 30%

Class project: Students will develop a project on a chosen topic in which they are expected to make a contribution to the general understanding of the ongoing dynamics of ICT and development. This contribution may be based on primary data or secondary literature. Students will report weekly on the progress of their projects in the second part of the class. A final paper (15-25 pages) based on these results will be due during the week of finals. Grade percentage: 50%

Course material: All required class readings (books or articles) are online. The list of readings for each week is just a starting point. We may decide as a group to delete and exchange material depending on where class discussions take us.

A brief announcement from the Office of Civil Rights: Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. Please be sure a letter of verification for approved accommodations is delivered to me as early in the semester as possible.

The Annenberg School for Communication is committed to upholding the University's Academic Integrity code as detailed in the SCampus Guide. It is the policy of the School of Communication to report all violations of the code. Any serious violation or pattern of violations of the Academic Integrity Code will result in the student's expulsion from the Communication major or minor.

About the instructor: Before joining USC, Dr. Hilbert has coordinated the Information Society Programme of United Nations Regional Commission for Latin America and the Caribbean for ten years (<http://www.cepal.org/SocInfo>). He has provided hands-on technical assistance in the field of ICT for development to Heads of States, government officials, legislators, diplomats, NGOs and civil society in 27 countries. In combination with this practical experience he has published peer-reviewed Journal articles in the fields of communication, development, public policy, political science, forecasting and social change. Dr. Hilbert has written five books about different aspects of ICT for development.

Class schedule

Not all readings are mandatory. We will prioritize and distribute readings among students, according to interests.

1- Introduction to the class & to **ICT for Development**: a dynamic interplay between technology, society and policy

2- What the **developing world** looks like: statistics, facts, faces of poverty, historical developments and aid. What **development** is: concepts and ongoing discussions.

Keywords: international development; Human Development Index; Happiness economics (look up at: www.wikipedia.org).

Videos: <http://www.gapminder.org>; [small world](#); [Economics of Happiness](#).

Amartya Sen (1999), "*Development as Freedom*", <http://books.google.com> excerpts

Millennium Development Goals (MDGs), <http://www.un.org/millenniumgoals>

Human Development Indicators: <http://hdrstats.undp.org/en/indicators>

UNDP (2005), "*International cooperation at a crossroads: Aid, trade and security in an unequal world*", Ch. 3 <http://hdr.undp.org/en/reports/global/hdr2005>

3- **ICT for Development**: overview and state-of-the-art

Keywords: ICT4D (look up at: www.wikipedia.org)

Videos: [Social networking for development](#); [Where was Google all this time?](#)

Manuel Castells (1999), "*Information Technology, Globalization and Social Development*". UNRISD Discussion Paper No. 114, <http://www.unrisd.org>

ITU (2009), "*Measuring the Information Society 2009*", <http://www.itu.int/ITU-D/ict/publications/idi/2009>

UNCTAD (2009), "*The Information Economy Report 2009: Trends and Outlook in Turbulent Times*", <http://www.unctad.org/ecommerce>

UNDP (2001), "*Making New Technologies Work for Human Development*", <http://hdr.undp.org/en/reports/global/hdr2001>

OECD (2008), "*Information Technology Outlook 2008*", <http://www.oecd.org/sti/ito>

Partnership for Measuring ICT for Development: <http://www.itu.int/ITU-D/ict/partnership>; World Bank: <http://www.worldbank.org/ict>; UN-GAID: <http://www.un-gaid.org>

4- The nature of **technological change** and the theory of technological innovation: past trajectories and future visions of ICT.

Keywords: The Structure of Scientific Revolutions; Technological determinism; Engineering; Technological convergence; List of emerging technologies; nootropic (look up at: www.wikipedia.org)

Videos: [Father of the Information Age](#); [2009 Nobel Prize in physics](#); [Exponential technological progress](#); [Brain computer interface](#); [wireless electricity](#).

Brian Arthur (2009), "*The Nature of Technology: What it is and how it evolves*", <http://books.google.com> excerpts

Devendra Sahal (1985), "*Technological guideposts and innovation avenues*", Research Policy 14 (1985) 61-82, <http://www.usc.edu/libraries> => eJournals

James Utterback (1994), "*Mastering the dynamics of innovation*", Ch.2 Dominant designs, <http://books.google.com>

Mikhail Lebedev and Miguel Nicolelis (2006), "*Brain-machine interfaces: past, present and future*", Trends in Neurosciences 29: 536-546, <http://www.usc.edu/libraries> => eJournals

Greely, et.al (2008), "*Towards responsible use of cognitive-enhancing drugs by the healthy*", Nature 456, 702-705 (11 December 2008); <http://www.usc.edu/libraries> => eJournals

Lee Feigenbaum, et. al. (2007), "*The semantic Web in action*", Scientific American, vol. 297, pp. 90-97, <http://thefigtrees.net/lee/sw/sciam/semantic-web-in-action>

5- **Innovation Theory** and digital development: creative destruction through digital means

Keywords: innovation; evolutionary economics; general-purpose technology; Kondratiev waves; creative destruction; technological innovation system (look up at: www.wikipedia.org)

Videos: [Greenspan on Schumpeter](#).

Joseph Schumpeter (1939), "*Business Cycles: A Theoretical, Historical, And Statistical Analysis of the Capitalist Process*", Chapter IV: The Contours of Economic Evolution, http://classiques.uqac.ca/classiques/Schumpeter_joseph/business_cycles/schumpeter_business_cycles.pdf

Carlota Perez (1983), "*Structural change and assimilation of new technologies in the economic and social systems*", <http://www.carlotaperez.org/papers/basic-structuralchange.htm>

Carlota Perez (2004), "*Technological revolutions, paradigm shifts and socio-institutional change*", <http://www.carlotaperez.org/papers/basic-technologicalrevolutionsparadigm.htm>

Manuel Castells (2000), "*The Rise of the Network Society*", Ch. 1; <http://books.google.com>

Carl Shapiro and Hal Varian (1999), "*Information rules: a strategic guide to the network economy*", Ch. 1 & 7, <http://books.google.com>

Yochai Benkler (2006), "*The Wealth of Networks How Social Production Transforms Markets and Freedom*", Ch. 1; http://cyber.law.harvard.edu/wealth_of_networks/Download_PDFs_of_the_book

6- The **digital divide**: origins, reality and outlook of a challenge far beyond access

Keywords: digital divide; Diffusion of Innovations; Telecentre (www.wikipedia.org)

Videos: [Digital divide in U.S.](#); [Rural digital divide in Honduras](#); [Brainstorming on solutions](#); [Mobiles divide and Google](#).

Everett Rogers (1962/2003), *“Diffusion of Innovations”*, <http://books.google.com> excerpts

Wilson Peres and Martin Hilbert (2009), *“The Information Society in Latin America and the Caribbean: Development of Technologies and Technologies for Development”*, Ch. II; United Nations ECLAC, <http://www.cepal.org/SocInfo>

Navas-Sabater, Juan, Dymond, Andrew and Juntunen, Niina. (2002), *“Telecommunications and information services for the poor”*, World Bank Discussion Paper [No. 432](#); <http://www.worldbank.org/reference> => Documents&Reports

Martin Hilbert (2009), *“When is cheap, cheap enough to bridge the digital divide? Modeling Income Related Structural Challenges of Technology Diffusion in Latin America”*.

7- **Public and private policies and strategies** for digital development: leapfrogging into the digital age

Keywords: United Nations; aid; forecasting; Delphi method; (look up at: www.wikipedia.org); issues surrounding [agenda setting](#) and [policy processes](#); [eEurope2002/2005/i2010](#).

Wilson Peres and Martin Hilbert (2009), *“The Information Society in Latin America and the Caribbean: Development of Technologies and Technologies for Development”*, Ch. XII; United Nations ECLAC, <http://www.cepal.org/SocInfo>

Rafael Popper and Ian Miles (2004), *“Overview of selected European IST scenario reports”*, http://fistera.jrc.ec.europa.eu/docs/Scenario_Pool_version_1.7.pdf

Michael Minges (2005), *“Evaluation of e-Readiness Indices in Latin America and the Caribbean”*, United Nations ECLAC, <http://www.cepal.org/SocInfo/publicaciones>

Martin Hilbert, Ian Miles and Julia Othmer (2009), *“Foresight tools for participative policy-making in inter-governmental processes in developing countries: Lessons learned from the eLAC Policy Priorities Delphi”*, *Technological Forecasting & Social Change*, 76, 2, 880-896; <http://www.usc.edu/libraries> => eJournals

The content of the following 10 weeks will depend on the research interests of students. Students are invited to propose new topics. Here are some topics that might be selected:

- **Poverty Reduction** by digital means

Robert Jensen (2007), *“The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector”*, *Quarterly Journal of Economics*, 122, 3; <http://www.mitpressjournals.org/doi/pdfplus/10.1162/qjec.122.3.879>

Randy Spence (2003), *“Information and Communications Technologies (ICTs) for Poverty Reduction: When, Where and How?”*, IDRC; http://network.idrc.ca/uploads/user-S/10618469203RS ICT-Pov_18_July.pdf

Catherine Adeya (2002), *“ICTs and Poverty: A literature review”*, IDRC; <http://web.idrc.ca/uploads/user-S/10541291550ICTPovertyBiblio.doc>

Don Slater and Jo Tacchi (2004), *“ICT innovations for poverty reduction”*, UNESCO, <http://unesdoc.unesco.org/images/0013/001361/136121e.pdf>

- Women and ICT

Information Technology and International Development Journal (2007), “*Special issue and women’s empowerment and the information society*”, <http://itidjournal.org/itid/issue/view/15>

Richard Heeks, Arun Shoba and Sharon Morgan (2004), “*Researching ICT-based enterprise for women in developing countries: a gender perspective*”, <http://www.womenictenterprise.org>

Cecilia Ng and Swasti Mitter (2005), “*Gender and the Digital Economy: Perspectives from the Developing World*”, <http://books.google.com>

Eszter Hargittai and Steven Shafer (2006), “*Differences in Actual and Perceived Online Skills: The Role of Gender*”, *Social Science Quarterly* 87:2, 432-448; <http://www.usc.edu/libraries>

- e-Democracy, transparency and participation

Keywords: Nineteen Eighty-Four; eRulemaking; e-democracy; e-voting; Freedom of information legislation. Videos: [e-dictatorship](#).

Freedominfo (2009), “*Freedom of information around the world*”, <http://www.freedominfo.org/>

Manuel Castells, et.al. (2007), “*Mobile Communication and Society: Ch. 7: The Mobile Civil Society: Social Movements, Political Power, and Communication*”.

Stephen Coleman (2005), “*The lonely citizen: Indirect representation in an age of networks*”, *Political Communication*, 22, 197–214. <http://www.usc.edu/libraries> => eJournals

Martin Hilbert (2009), “*The Maturing Concept of e-democracy: From e-Voting and Online Consultations, to Democratic Value Out of Jumbled Online Chatter*”, *Journal of Information Technology and Politics*; 6, 2; 87-110; <http://www.usc.edu/libraries> => eJournals

- Intellectual Property Rights

UK Commission on Intellectual Property Rights (2002), “*Integrating intellectual property rights and development policy*”; Ch 1 and 5. http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf

Ruth Okediji (2004), “*Development in the Information Age Issues in the Regulation of Intellectual Property Rights, Computer Software and Electronic Commerce*”, UNCTAD, http://www.iprsonline.org/unctadictsd/docs/CS_Okediji.pdf

Rod Falvey, Neil Foster, and David Greenaway (2004), “*Intellectual Property Rights and Economic Growth*”, http://www.gep.org.uk/leverhulme/publications/Papers/2004/2004_12.php

- e-Health

Keywords: [Healthcare IT News](#), [iHealthBeat](#).

WHO (2006), “*eHealth tools and services: needs of the member states*”, http://www.who.int/kms/initiatives/tools_and_services_final.pdf

Karl Stroetmann, et. al. (2006), “*eHealth is Worth it: The economic benefits of implemented eHealth solutions at ten European sites*”, http://www.ehealth-impact.org/download/index_en.htm

Empirica (2009), “*Benchmarking ICT use among General Practitioners in Europe*”; <http://www.ehealth-indicators.eu/>

- e-Education

Human Technology: An Interdisciplinary Journal on Humans in ICT Environments (2005), "Special issue on ICT and education"; <http://www.humantechnology.jyu.fi/archives/october05.html>

BECTA (2006), "The BECTA Review 2006: Evidence on the progress of ICT in education", <http://publications.becta.org.uk/display.cfm?resID=25948>

OECD (2007), "Giving Knowledge for Free: The Emergence of Open Educational Resources", <http://www.oecd.org/dataoecd/35/7/38654317.pdf>

- Economic Growth and digital productivity

Keywords: Productivity paradox. Videos: [ICT, productivity and growth](#);

Erik Brynjolfsson and Adam Saunders (2009), "Wired for Innovation: How Information Technology is Reshaping the Economy", <http://books.google.com>

UN ECLAC (2010), "Innovation and Economic Development: The Impact of Information and Communications Technologies in Latin America"; Edward Elgar.

Edward Steinmueller (2001), "ICTs and the possibilities for leapfrogging by developing countries", International Labour Review 140(2): 193-210.

Paul David (1990), "The Dynamo and the Computer: A Historical Perspective on the Modern Productivity Paradox", American Economic Review, 1990, 355-61: <http://www.usc.edu/libraries>
=> eJournals

- e-Business and e-commerce

Paulo Tigre (2003), "E-Commerce Readiness and Diffusion: The Case of Brazil", <http://crito.uci.edu/papers/2003/brazil.pdf>

United Nations ECLAC (2007), "Foreign Investment in Latin America and the Caribbean 2007. ICT: transnational corporations and business strategies", [Ch 2 & 3](#), http://www.cepal.org/publicaciones/xml/1/32931/lc2360i_f2.pdf

UNCTAD (2008), "Information Economy Report 2007-2008: Science and technology for development: the new paradigm of ICT", Ch 4 & 5; http://r0.unctad.org/ecommerce/ier07_en.htm

- e-Government

United Nations (2008), "UN e-Government Survey 2008: From E-Government to Connected Governance", http://www.unpan.org/egovkb/global_reports/08report.htm (see also reports 2003, 2004, 2005)

Darrell West (2007), "Global e-government 2007", Brown University, <http://www.insidepolitics.org/policyreports.html> (see also reports 2000-2006)

Richard Heeks (2006), "eGovernment: Improving the National and International Measurement, Evaluation and Comparison of eGovernment", <http://www.sed.manchester.ac.uk/idpm/research/publications/wp/igovernment/index.htm> (see also other papers)

United Nations ECLAC (2007), "White Book of e-Government Interoperability for Latin America and the Caribbean", <http://www.cepal.org/ddpe/publicaciones/xml/7/28647/W129.pdf>

- Low-cost access

Videos: [Impact of mobile phones in Africa](#); [One laptop per child](#).

Georg Caspary and David O'Connor (2003), "Providing low-cost information technology access to rural communities in developing countries: What works? What pays?" OECD, <http://www.oecd.org/dataoecd/13/52/7112502.pdf>

Francisco Proenza, Roberto Bastidas-Buch and Guillermo Montero (2001), "Telecenters for Socioeconomic and Rural Development in Latin America and the Caribbean"; <http://www.iadb.org/sds/itdev/telecenters/fullrep.pdf>

Michael Best (2003), "The wireless revolution and universal access". In Trends in Telecommunications Reform. ITU; http://mikeb.inta.gatech.edu/uploads/papers/TTR03_Chapter_7.pdf

The Economist (2008), "The laptop wars: Will charity or profit end the digital divide?", <http://www.nextbillion.net/news/the-laptop-wars>

- Environment and digital disaster management

Keywords: Sustainable development.

European Presidency Sweden (2009), "A Green Knowledge Society - An ICT policy agenda to 2015 for Europe's future knowledge society"; http://ec.europa.eu/information_society/eeurope/i2010/greenknowledgesociety.pdf

Ann Majchrzak, Sirkka Jarvenpaa and Andrea Hollingshead (2007), "Coordinating Expertise Among Emergent Groups Responding to Disasters"; Organization Science, 18: 1, 147-161; <http://www.usc.edu/libraries> => eJournals

Timothy Sellnow, Matthew Seeger and Robert Ulmer (2002), "Chaos theory, informational needs, and natural disasters", Journal of Applied Communication Research, 30: 4, 269-292; <http://www.usc.edu/libraries> => eJournals

Kathrin Stolzenburg (2007), "Regional Perspectives on Digital Disaster Management in Latin America and the Caribbean", UN, <http://www.cepal.org/publicaciones/xml/9/28529/W128.pdf>