CMGT 582- Communication for International Development

Fall 2012, Location: ASC 240

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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 over 80% 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. In this seminar we still start with reviewing the multiple dimensions of development and poverty. We will discuss questions like: What is development? Is poverty merely a matter of economic well-being? Why are there so many poor? What are the driving forces behind development? What is the relation between poverty, development, and globalization? What are the dynamics and interplay between developed and developing societies? What are the current (micro- and macro) approaches to eliminate global poverty? How do entrepreneurs and innovations drive development and reduce poverty? What is and what can the international community do about it (like the global business sector, multinational enterprises, United Nations, World Bank, global NGOs)? And finally: What is the role of information and communication as building blocks 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). In less than two decades, 2 out of 5 people worldwide have linked up through the Internet, and 4 out of 5 have connected with mobile telephony. Our generation of scholars 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 innovation theory, and the theories behind technology and social change. We discuss questions like: What is the nature of technology and how does it evolve? How do ICT already affect the lives of those living in poverty and what role can ICT play in development? How do digital technologies and applications differ between developed and developing countries? What are examples of how innovative entrepreneurs use ICT to reduce poverty? What works, what doesn't and what are the costs? Where are ICT evolving from here? And finally: What can we do about it?

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 weeks we will review the theories and dynamics behind both of the underlying key concepts: development and digital innovation. During the remaining weeks, students select and deepen their understanding of a specific topic that crosscuts both concepts. This might include, but is not limited to: entrepreneurship and ICT; e-education, e-literacy, e-health, e-business and management, e-government, digital and informational poverty, future technologies, micro-credits, poverty reduction strategies, capacity building, gender and women's rights, domestic violence, freedom of speech, privacy, intellectual property rights, NGOs and global networking, United Nations and global governance, development aid, environmental and disaster management, agenda setting, digital culture, happiness and quality of life, social networking (role of Facebook, Twitter and YouTube), among others.

Course requirements:

In-class participation: Students are expected to make informed contributions to class discussions and activities. This includes contributions 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 prioritize, add or delete material depending on where the 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.

About the instructor: Before joining USC, Dr. Hilbert coordinated the Information Society Programme of United Nations Regional Commission for Latin America and the Caribbean (http://www.cepal.org/SocInfo) for ten years. He has provided hands-on technical assistance in the field of ICT for development to Presidents, 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, economics, political science, women's studies, forecasting and social change, which have been cited hundreds of times by other scholars. Dr. Hilbert has written five books about different aspects of ICT for development. His work has been featured in Science, The Wall Street Journal, Washington Post, The Economist, Scientific American, NPR, BBC, Die Welt, Correio Braziliense, La Repubblica, El Pais, among others. More: http://www.martinhilbert.net

Class schedule

Not all listed 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

Videos: Global Growth of Information (4min); small world (6min).

Martin Hilbert (2010), "*Towards a conceptual framework for ICT for Development*", http://martinhilbert.net/HilbertCube.pdf

2- What is **development**? What does the **developing world** look like? Statistics, facts, faces of poverty, historical developments and aid.

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

Videos: Human Development Trends; http://www.gapminder.org; Millennium Development Goals (4min); Problems with GDP (8min); Economics of Happiness (4min).

Amartya Sen (1999), "*Development as Freedom*", http://books.google.com (Chapters 2 & 4; optional: Ch.1)

Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2010), "*The Measurement of Economic Performance and Social Progress Revisited*", http://www.stiglitz-sen-fitoussi.fr/documents/overview-eng.pdf (Prolegomena: p. 3-5)

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

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

Videos: Social networking for development (16min); Where was this Google all this time? (7min); Rural digital divide in Honduras (3min); Effects of increased communication (17min).

ITU (2011), "*Measuring the Information Society 2011*", http://www.itu.int/ITU-D/ict/publications/idi/index.html

UNCTAD (2011), "*The Information Economy Report 2011"*, http://www.unctad.org/ecommerce

OECD (2010), "*Information Technology Outlook 2010*", http://www.oecd.org/sti/ito

OECD (2011), "*Communications Outlook 2011*", http://www.oecd.org/sti/broadbandandtelecom/

OECD (2010), "ICTs for Development: Improving Policy Coherence", http://www.infodev.org/en/Article.478.html

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- What are the **origins** of and current **solutions** to underdevelopment and **poverty**? What role does **globalization** play?

Keywords (look up at: www.wikipedia.org): Washington Consensus; United Nations System; MDGs; Four Freedoms (European Union).

Videos: The case for free trade (6min); The Myths of Free Trade & Markets (19min: from min13 to min32); Stiglitz on markets (4min); The Story of Stuff (20min); Fair Trade (7min); Chomsky on Globalization (11min); Sachs on ICT and MDGs (3min); Jeffrey Sachs interview (10min); The world is flat (3min); The end of poverty? Think again (3min).

Noam Chomsky (1998), "*A Century Later*", http://www.chomsky.info/articles/199809--.htm

John Williamson (1990), "*What Washington Means by Policy Reform*", http://www.iie.com/publications/papers/paper.cfm?researchid=486#1

Ha-Joon Chang (2003), "*Kicking Away the Ladder: The 'Real' History of Free Trade*"; http://www.ilocarib.org.tt/trade/documents/economic_policies/SRtrade2003.pdf

Joseph Stiglitz (2002), "*Globalism's Discontents*", http://www.prospect.org/cs/articles?article=globalisms_discontents

United Nations (2012), "*The Millennium Development Goals Report 2012*", https://www.un.org/millenniumgoals/pdf/Press%20Release%20MDG%20Report%202012.pdf (Press Release)

Jeffrey Sachs (2005), "*The End of Poverty*", http://www.time.com/time/magazine/article/0,9171,1034738,00.html

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

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

Videos: Exponential technological progress (23min); Dominant Design (10min); Brain computer interface (2min).

Brian Arthur (2009), "*The Nature of Technology: What it is and how it evolves*", http://books.google.com ; Ch: 2 & 9

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

David, Paul (1985), "*Clio and the Economics of QWERTY*", American Economic Review, *75*(2), 332-37, http://www.usc.edu/libraries => eJournals

Optional: J. Utterback (1994), "*Mastering the dynamics of innovation*", http://books.google.com; Ch.2 (p. 23).

Select one of the following papers:

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

6- **Innovation theory** and social evolution: long waves of human progress

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

Videos: Claude Shannon: Father of the Information Age (29min); Carlota Perez on golden age (4min).

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

7- **Entrepreneurship** for development: how **innovations and business** ideas tackle poverty and foster development.

Keywords (look up at: www.wikipedia.org): Entrepreneurship; Microfinance; Social Enterprise; Bottom of the pyramid; innovation outside the box.

Videos: Technology And Microfinance (2min); Fighting Poverty With Innovation (19min).

Lundvall, B.-A., Joseph, K. J., & Chaminade, C. (2009). *Handbook of Innovation Systems and Developing Countries: Building Domestic Capabilities in a Global Setting*. Edward Elgar Publishing; http://books.google.com.

Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), 36–44. http://www.usc.edu/libraries

Prahalad, C. K., & Hart, S. L. (2002). The Fortune at the Bottom of the Pyramid. *Strategy and Business*, First Quarter(26). http://www.strategy-business.com/article/11518?gko=9a4ba

Heeks, R., Duncombe, R., Morgan, S., & Arun, S. (2005). Women's ICT-Based Enterprise for Development. *University of Manchester*. http://www.womenictenterprise.org/handbook.htm

Satish, P. (2005). Mainstreaming of Indian Microfinance. *Economic and Political Weekly*. Retrieved from http://www.epw.in/microfinance/mainstreaming-indian-microfinance.html

8- **Digital Particularities** and Information Societies: creative destruction through digital means

Keywords (look up at: www.wikipedia.org): e-business, e-government, e-democracy, example of social networks.

Videos: Social Networks (18 min); ICT4D examples (10 min).

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

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

Manuel Castells (2009), "*Communication Power*", http://books.google.com ; pages: 19-42.

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

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

Keywords (look up at: www.wikipedia.org): digital divide; Diffusion of Innovations; Telecentre, social network.

Videos: Digital divide in U.S. (2min); Brainstorming on solutions (2min); Watch an innovation diffuse in 3 min (3 min).

Tom Valente (2010), "*Diffusion of Innovations: Network Analysis*", VideoPart1 (10min); VideoPart2 (9min); VideoPart3 (10min).

Everett Rogers (1962/2003), "*Diffusion of Innovations*", http://books.google.com ; pages: 168-202.

Martin Hilbert (2011), "*The end justifies the definition: The manifold outlooks on the digital divide and their practical usefulness for policy-making*". Telecommunications Policy, 35(8), 715-736. http://www.martinhilbert.net/ManifoldDigitalDivide_Hilbert_AAM.pdf

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 ; pages: 1-40.

Martin Hilbert (2010), "*When is cheap, cheap enough to bridge the digital divide? Modeling Income Related Structural Challenges of Technology Diffusion in Latin America*", World Development, Vol.38, issue 5, 756-770; http://www.usc.edu/libraries => eJournals.

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

Keywords: (look up at: www.wikipedia.org): aid; forecasting; Delphi method; agenda setting and policy processes; eEurope2002/2005/i2010.

Wilson Peres and Martin Hilbert (Eds.) (2010), "*The Information Society in Latin America and the Caribbean: Development of Technologies and Technologies for Development*", Ch. XII, p.273-310; United Nations ECLAC Books #98, http://www.cepal.org/SocInfo

European Commission (2011), "*Digital Agenda for Europe: ICT for Societal Challenges*", http://ec.europa.eu/information_society/tl/qualif/ict_for_societal_challenges.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), "F*oresight 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 .

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

11- **Review** and discussion of **class papers**

The content of the following weeks will depend on the research interests of students. Students will select individual research topics. We will have student presentations during the remaining classes.

Here are some topic suggestions, but students are invited to propose their own topics:

- **Poverty Reduction** by digital means

Robert Jensen (2007), "*The Digital Provide: 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

- **Low-cost access**

Videos: Impact of mobile phones in Africa; One laptop per child.

Martin Hilbert (2010), "*When is cheap, cheap enough to bridge the digital divide? Modeling Income Related Structural Challenges of Technology Diffusion in Latin America*", World Development, Vol.38, issue 5, 756-770; http://www.usc.edu/libraries => eJournals.

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

- **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

- **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

- e-Business and e-commerce

Brynjolfsson, E., & Saunders, A. (2009). Wired for Innovation: How Information Technology is Reshaping the Economy. USA: The MIT Press. http://books.google.com

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

Brynjolfsson, E., Hitt, L. M., & Yang, S. (2002). Intangible Assets: Computers and Organizational Capital. Brookings Papers on Economic Activity, 2002(1), 137–198. http://www.usc.edu/libraries

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/lcg2360i_f2.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

- 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

- 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-Government

United Nations (2012), "*UN e-Government Survey 2012: E-Government for the People*", http://www.unpan.org/egovkb/global_reports/08report.htm (see also reports 2003, -2010)

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

- Environment and digital **disaster management**

Keywords: Sustainable development. Videos: mobile disaster response.

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