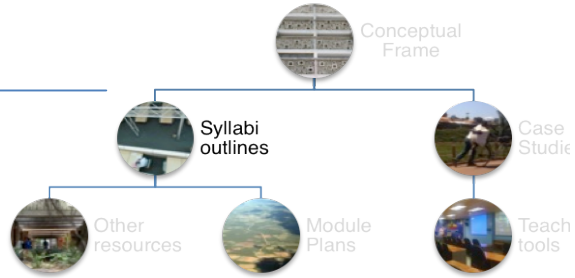
Syllabus Outline: ICT and Development (Post-Graduate)



1. Course Description

The relationship between Information and Communication Technologies (ICT) and development is generally assumed to be enabling and constructive. The aim of this course is to engage with the ICT for Development (ICT4D) discourse critically whilst understanding the practical constraints of implementing ICT developmental initiatives in the Global South.

2. Entry Requirements

- Undergraduate degree.
- Completion of course(s) in Development Theory or similar

3. Time Commitment and Format

- 5 hours per week; over 11 weeks

4. Justification / Rationale

The aim of the course is an understanding of the perils and limits of technology-driven projects. The module interrogates selected applications of ICT in more general development practice. The approach is inter-disciplinary drawing on development studies, information science, urban studies and sociology. This module is an elective course, available in the second year of the MUP, appropriate for specialisations in Economic Development, Human Development, Urban Management, Urban Poverty and Infrastructure Planning.

5. Learning Outcomes

The *first 4 weeks* of the course focus on the academic work that informs the conceptual frames underpinning ICT and Development. *Weeks 5 to 11* take a dual approach; students are required to work on a practicum whilst examining case literature associated with a number of themes pertinent to practice.

Upon conclusion of the course, students will:

- Have critical insights into the key debates informing ICT4D within the context of development theory
- Formulate their own conceptual frames and research questions on the perils, limits and potentials of applying ICT to human development
- Understand and reflect on the contextual challenges and local specifics that inform application through development of appropriate research and analytic methods
- Critically engage with ICT policy at Bilateral, National and local levels
- Research, plan and execute an ICT-driven intervention.

6. Pedagogical Approach

The course becomes increasingly interactive as it progresses. Methods of delivery are: instructor-led learning through lecture delivery and class discussion facilitation; peer-learning through seminar-based interaction where students prepare a paper on a topic and present to peers; experiential learning through the case method based on examination of documented cases and interrogation through role play exercises and field visits where appropriate; project work and paper preparation enable self-learning.

The approaches recommended for each of the learning units is shown adjacent.

7. Support and Mentoring

Academic instruction by course convenor/lecturers and studio/practicum instructors to assist with projects. The latter would need to have excellent ICT skills in web design, content management and information systems, with a grounded understanding of the social aspects of ICT application.

Students require full time access to a computer laboratory and other technological resources necessary for project work.

Week	Unit	Pedagogical Approach	Self study
1	The Origins of ICT4D within the Context of Development Theory	Instructor-led	Required reading
2			
3	The Network Society		
4	The Digital Divide and Social Inclusion	Peer learning	Seminar preparation
5	ICT and the City		
6	E-Governance	Experiential learning through the case method	Practicum
7	Technology in the Global South: Constraints and Innovations		
8	ICT and Rural Development		
9	Community Informatics and Virtual Capital		
10	Practicum	Studio input and on site learning	
11	Practicum: conclusion and presentation	Peer review and assessment	

8. Learning Units and Objectives

The course comprises nine parts:

i. The origins of ICT4D in Development Theory
ii. The Network Society
iii. The Digital Divide and Social Inclusion
iv. ICT and the City
v. E-Governance
vi. Technology in the Global South
vii. ICT and Rural Development
viii. Community Informatics and Virtual Capital
ix. Practicum

Cases are suggested from week 6 onwards. They are listed with their respective resources in a separate document entitled **ICT and Development Cases.**

Learning Units	Learning Objectives	Week	Outline
I. The Origins of ICT4D within the Context of Development Theory	Deep critical engagement with the tenets of the ICT4D debates and ability to position such within the context of development theory	1 2	This introductory unit will focus on the theoretical evolution of the relationship between ICT and development. It will do so in two dimensions: a chronological unfolding of uneven development and the origins of ICT4D as a cluster of debates. A second dimension is a critical reflection on the discourse elements of the promotion of technology for development, questioning the paradigmatic origins of ICT4D (Modernisation Theory; neo-liberal frames and the role of bilateral agencies) and considering alternative views (from the post-development and Foucauldian perspectives).
ii. The Network Society	A thorough understanding of the characteristics and origins of the notion of the network society	3	This is a continuation of the theoretical exploration of key concepts. Understanding the role of ICT in shaping economic space is critical to the dynamics of digitally driven production and how new technologies influence global economic relations.
iii. The Digital Divide and Social Inclusion	Clarity on the notion of the digital divide, the limits of the term and practical engagement with how it can be overcome	4	Debates on the digital divide have matured from their original determinist leanings. This unit examines this evolution and combines it with literature on social inclusion. Gender, age and cultural coordinates are inputs into this dynamic.
iV. ICT and the City	Practical engagement with how ICT impacts on urban space and the city as a whole; how it fits with other urban infrastructure	5	The relationship between new technologies and the urban is critical. Despite early dystopian notions that ICT undermines urban agglomeration the opposite has proven true. Interesting relationships exist between urban space and ICT. At a local level, digitally augmented urban design is used to enhance public space and enable inclusion in some cases.
V. E-Governance	Familiarity with the mechanics and limits of e-governance	6	ICT has become a critical governance tool but seldom extends to the domain of civil society. A critical look at the limitations and parameters of e-governance is necessary.
VI. Technology in the Global South	A practical understanding of the issues, limitations and opportunities for technology use in the Global South	7	The ubiquity of mobile phones and selected distribution of computer access contribute to a different socio-technical landscape in many parts of the South. Applicable cases in India and elsewhere are studied.

VII. ICT and Rural Development	An understanding of the constraints and opportunities of ICT access in rural areas	8	Distance, lack of access to markets and limited proximity to educational opportunities places ICT in a strong position to mitigate rural marginalisation. Cases are examined to understand how.
VIII. Community Informatics and Virtual Capital	Practical engagement with community informatics in practice and the extent and limits of virtual capital – and how it can be distinguished from other forms of social capital	9	Community Informatics (CI) is a practice-based body of literature that draws from sociology, information science and communications science in interrogating appropriation of technology by community groups and networks. Work on virtual capital continues on the theme of social capital as an essential element of social infrastructure. Cases are examined.
IX. Practicum	Practical work that equips students with the necessary technical skills to design, plan and execute a design intervention. Weeks 6 – 9 therefore occurs in parallel to the theory compnents of the course.	6 7 8 9 10 11	Depending on the specialisation, students choose one of three project options. They are: • Working with a *community* organisation in developing a *web site / portal* that builds on mobile connectivity also. Emphasis is on negotiating appropriate content in accordance with user needs. (Appropriate for specialisations in Human Development, Urban Poverty and Economic Development) • Analysis and policy recommendations on a *city portal*. This entails analysis of an existing site through interviews and perusal, and formulating interventions accordingly. (Applicable to specialisations in Urban Management, Urban and Regional Planning) • Building an *urban design intervention* using the principles of recombinant design. (Specialisations in Urban and Regional Planning, Infrastructure Planning)

9. ASSESSMENT

Three outputs:

- Seminar paper on theoretical debates (2 500 words)
- Assessment on case learning; participation in role play for example
- Project

10. Secondary Sources

- Aurigi, A. (2005). "Competing Urban Visions and the Shaping of the Digital City." Knowledge, Technology and Society **18**(1): 12-26.
- Avgerou, C. & Walsham, G. (eds) (2000) Information Technology In Context: Studies From The Perspective Of Developing Countries, Ashgate, Aldershot, UK
- Bellamy, C. & Taylor, J. (1998) Governing in the Information Age, Open University Press, Buckingham
- Castells, M. (2000a). Grassrooting the Space of Flows. Cities in the Telecommunications Age: the Fracturing of Geographies. J. O. Wheeler, Y. Aoyama and B. Warf. New York, Routledge.
- Castells, M. (2006) Mobile Communications and Society: A global Perspective, Cambridge, Mass.: MIT Press.
- Crang, M. C., T & Graham, S. (2006). "Variable Geographies of Connection: Urban Digital Divides and the Uses of Information Technology." Urban Studies **43**(13): 2551-2570.
- Crang, M. and S. Graham (2007). "Sentient Cities: Ambient Intelligence and the politics of Urban Space." Information Communication and Society **10**(6): 789-817.
- Curtin, G. et al (2003) The World of e-Government, Haworth Press, New York, NY
  Dunleavy, P., Margetts, H., Bastow, S. & Tinkler, J. (2006) Digital Era Governance, Oxford University Press, Oxford
- Donner, J. (2004). "Microentrepreneurs and Mobiles: An Exploration of the Uses of Mobile Phones by Small Business Owners in Rwanda." Information Technologies and International Development **2**(1): 1 - 21.
- Donner, J. (2005). User-led Innovations in Mobile Use in Sub-Saharan Africa. Receiver, Vodafone.
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- Donner, J. (2008). "The Rules of Beeping: Exchanging Messages via Intentional 'Missed Calls' on Mobile Phones." Journal of Computer-Mediated Communication **13**: 1-22.
- Gauld, R. & Goldfinch, S. (2006) Dangerous Enthusiasms: E-Government, Computer Failure and Information System Development,

  University of Otago Press, Dunedin, New Zealand

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  London, Routledge.
- Graham, S. (2004) (Ed) The Cybercities Reader. New York, Routledge
- Hampton, K. N. and B. Wellman (2003). "Neighboring in Netville: How the Internet supports Community and Social Capital in a Wired Suburb." City and Community **2**(4): 277 - 311.
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- Heeks, R. (2002) 'i-Development not e-development', Journal of International Development, 14(1), 1-12
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- Krishna, S. & Madon, S. (eds) (2003) The Digital Challenge: Information Technology in the Development Context, Ashgate, Aldershot, UK
- Schech, S. (2002). "Wired for Change: the Links between ICTs and Development Discourses." Journal of International Development

  14: 13 - 23.
- Webster, F. (2002) Theories of the Information Society, London: Routledge
- .Warschauer, M. (2003) Technology and Social Inclusion: Re-thinking the Digital Divide, Cambridge, Mass.: MIT Press.

Web Resources (Cases and other)

http://www.communityinformatics.net/
http://www.communityinformaticsprojects.com/
http://www.bridges.org/case_studies
http://www.apdip.net/resources/case
www.govtech.net
www.egov4dev.org
http://www.eldis.org/ict/index.htm
http://www.infodev.org/en/Article.384.html
http://www.idrc.ca/panasia/ev-43441-201-1-DO_TOPIC.html

Relevant Journals and online periodicals

Information Technology for Development,
Information Technologies and International Development,
Development Informatics Working Paper Series, IDPM, University of Manchester, UK
The Information Society
Journal of Urban Technology
Information, Communication and Society (ICS) Journal

http://idpm.man.ac.uk/publications/wp/di/index.shtml (IDPM)
http://topics.developmentgateway.org/ict (World Bank)
http://www.ci-journal.net/index.php/ciej (Journal of Community Informatics)