Hakikur Rahman

1038 Begum Rokeya Shoroni
Sheorapara, Dhaka-1216
01965 203717
email@hakik.org

July 28, 2014

HR Manager
Concerned University.

Thank you for considering my application for the position of Professor. With my professional experience in academic, research and administrative jobs at national and international agencies I feel that I would be a good fit for your University.

I have started my career as an academic in 1981 at the then Dhaka Engineering College, later on turned into Dhaka University of Engineering & Technology (DUET) as a Lecturer by contributing to the academic sphere. I was teaching and performing administrative tasks at the ICMS College, a K12 institution under the Bangladesh Technical Education Board as the Principal from 1989 to 2008.

Furthermore, in between 1982 and 2008, in addition to serving in key positions, I have performed various duties in the role of Director, Project Manager and MIS Expert at the Bangladesh Open University, United Nations Development Programme and World Bank respectively and worked throughout Bangladesh for providing team lead support in the area of human resource development and entrepreneurship development. I have served as a post doctoral researcher at the University of Minho in Portugal from November 2008 to November 2013 that exposed me to lead team of Academics, Researchers and Subject Matter Experts yielding research based products, which I seem, will be helpful for academic position too.

All these activities provided me the opportunity to perform blended academic lead, management skill and administrative tasks successfully. It will be a pleasure on my part to contribute my experiences in your esteemed University.

Thank you very much for your time and consideration. Please feel free to contact me with any questions you have about my application.

Sincerely yours,

Hakikur Rahman

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RESUME

Objective Summary

To work in an academic environment that fosters strategic knowledge development and collaborative learning environment.

Profile

With significant expertise in academic and management disciplines I have been exposed to the following environments:

- Software and hardware engineering
- LAN/WAN/WiFi establishment
- Knowledge management
- Business intelligence
- Entrepreneurship development at micro and macro levels
- Human resource development (academic, entrepreneurship and research)

Education

Ph.D. (Information Communication Technology), 2011, Empresarial University of Costa Rica, Costa Rica – GPA: 3.75 - e-Governance Framework at the Local Government Level: Empowerment of Community People and Improvement of e-Governance at the Grass Roots

Ph.D. (Computer Engineering), 2001, Ansted University, BVI, UK– GPA: 3.77 – Large-Scale Information Dissemination in Congested Bandwidth over Dynamically Distributed Wide Area Networks exposed to Web Database Systems

M.E (**Electrical Engineering with Computer special**), 1986, American University of Beirut, Lebanon, Registered under the State of NY, USA – Grade: A

BSc. Engg (Electrical & Electronics Engineering), 1981, Bangladesh University of Engineering & Technology, Dhaka – Division: First

HSC. (Science), 1975, Notre Dame College, Dhaka - Division: First

SSC. (Science), 1972, Nawabpur Govt. High School, Dhaka – Division: First

Skills Summary

- Operating Systems / Platforms- Windows, Linux
- Software Development Languages- C+, Java, PHP/Mysql
- Master Data Management- SAP
- Data/Process Modeling- Microsoft Visio
- Web solutions- Microsoft Frontpage, Joomla
- Other platforms- Wordpress, Moodle, Blog, Wiki

Professional Work Summary

University of Minho, Portugal   November 2008 – November 2013
Post Doctoral Researcher
Responsible for multiple work streams including conducting an empirical research on the utilization of open innovation strategies for the development of small and medium scale enterprises in Portugal; thereafter, extending the survey to India, Israel, and Turkey; conducting courses on innovation and developing tools for the research.

Significant Accomplishments:
- Prepared proposals for projects in relation to organizational development and organizational intelligence and received approval for funding (more than $200K);
- Designed and developed instruments for conducting the surveys through interactive contacts with a group of Subject Matter Experts (SMEs) in Portugal;
- Analyzed the business development processes, especially on open innovation, such as venture capital, licensing, copyright and trademark for comparative study and propagating an enhanced model to the developing countries;
- Developed and maintained web sites related to the department, research group and students disseminating open innovation management.

ICMS College, Dhaka, Bangladesh   October 1989 – November 2008
Principal
Overall management of the ICMS College, which is a technical institute that delivers technical education to K12 students with courses covering network design, network maintenance, software development etc.

Significant Accomplishments:
- Preparation of all course materials and manuals for the K12 technical education institute;
- Preparation of course curriculum;
- Conduct specialized courses for personnel of different govt. and non-govt. organizations;
- Conduct LAN, hardware troubleshooting, professional programming courses;
- Liaise with Govt. of Bangladesh and Technical Education Board for student's registration, affiliation, course curriculum, examination and other affairs.

UNDP, Bangladesh   December 1999 – December 2006
National Project Coordinator (Project Manager under the direct supervision of UNDP, NY.)
Designed and implemented the then largest WiFi Mesh in Bangladesh under the Sustainable Development Networking Program (SDNP), United Nations Development Program (UNDP), NY., USA.

Significant Accomplishments:
- Developed, piloted and implemented the sustainable development networking program;
- Prepared the budget of $5M and received approval besides planning and executing the project successfully;
- Prioritized the budget allocation towards work streams and presented recommendation to the Steering Committee;
- Identified the critical success factors for sustainable operation and developed marketing and operations plan of the SDNP;
- Managed the communication with all stakeholders like Steering Committee, UNDP Resident Representative and New York;
- .

- Led a technical team of 35+ to build the infrastructure, including estsblishment of regional nodes and subnodes in over 12 academic institutions and NGOS acting as Multipurpose Information Service Providers;
- Established I-root server and the Internet Exchange in Bangladesh with the assistance of UNDP, APNIC and PCH by leading a technical team of 100+.

Bangladesh Open University (BOU), Gazipur, Bangladesh   February 1998 – December 1999
Director
Computer Division
Designed and developed Fiber based campus wide area network and established student information information system.

Significant Accomplishments:
- Lead a team of 20+ members to establish communication network inside BOU campus and 12 regional centers across the country;
- Lead the Computer Division and Software development team for implementation of Oracle based Computerized Student Information Management System (SIMS);
- Planning, analysis, development, hardware up-grade, testing transitions to operation of the application communicating to all RRCs through the established network connecting to over 300+ workstations.

World Bank, Tangail, Bangladesh   May, 1996 – January, 1998
MIS/Expert
Jamuna Multipurpose Bridge Authority
Designed and developed the MIS system for the project affected area on socio-economic and ecosystem management.

Significant Accomplishments:
- Lead a team of 40+ for the collection, design, development and maintenance of the management information system that was used by the project (the then largest World Bank funded) for the socio-ecosystem management;
- Coordinated all MIS activities related to socio-economic, ecological, limnological, hydological and environmental concern;
- Eestablished the baseline data; prepared the survey and monitoring manual; enumerated the socio-economics of affected folks; surveyed the project affected parameters; prepared proposals for aqua-culture development and alternative employment generation;
- Prepared the guide for the monitoring of aquatic habitat in closed and open water; changes in ecology, limnology and hydrology; progress in aqua-culture development; employment generation activities; mitigation benefits and socio-economics for the Project Affected Persons (PAPs).

Conference Proceedings/Journal Papers/Articles:

1   Rahman, H. (2013). Open Innovation in Entrepreneurships: Taxonomies of Innovation in Knowledge-Based Economy, International Journal of E-Entrepreneurship and Innovation (IJEEI), 4(3), 1-15.

2   Porath, A., Ramos, I., Rahman, H. (2013). Government - Academy Different Approaches to Technology Transfer. A Proceeding of the 6th Euromed Conference of the Euromed Academy of Business (Confronting Contemporary Business Challenges through Management Innovation), 23-24 September 2013 Estoril, Lisbon, Portugal.

3   Rahman, H., Acilar, A. & Ramos, I. (2013). Adoption Of Open Innovation Strategies Among SMEs: A Comparative Study In Portugal And Turkey, A Proceedings of the 2013 Breckenridge, Colorado International Academic Conference, Hilton Hotel Breckenridge, August 5-7, 2013, Colorado, USA, pp. 249-258.

4   Rahman, H. & Ramos, I. (2013a). Implementation of E-Commerce at the Grass Roots: Issues of Challenges in Terms of Human-Computer Interactions, *International Journal of Information Communication Technologies and Human Development (IJICTHD), 5*(2), 1-19.

5   Porath, A., Rahman, H. & Ramos, I. (2013). Collaborative Research (CR): To Reduce Transaction Cost in Open Innovation, *International Journal of Information Communication Technologies and Human Development (IJICTHD), 5*(2), 47-58.

6   Rahman, H. & Ramos, I. (2013b). Challenges in Adopting Open Innovation Strategies in SMEs: An Exploratory Study in Portugal, In *Proceedings of the Issues in Informing Science and Information Technology Education Conference*, Porto, Portugal, July 4-7, 2013. In E. Cohen & E. Boyd (Eds.), *Proceedings of Proceedings of the Informing Science and Information Technology Education Conference 2013* (pp. 431-448).

7   Rahman, H. (2013). Managing Information for Real-Time Decision Support at Community Level. *International Journal of Information Communication Technologies and Human Development (IJICTHD), 5*(1), 60-76. doi:10.4018/jicthd.2013010104

8   Rahman, H. & Ramos, I. (2012). Open Innovation in Entrepreneurships: Agents of Transformation towards the Knowledge-Based Economy. In *Proceedings of the Issues in Informing Science and Information Technology Education Conference*, Montreal, Canada, June 22-27, 2012

9   Rahman, H. & Ramos, I. (2011a). Is Open Innovation imperative to Small and Medium Enterprises?: A Comparative Study, A paper in AMSIC2011, Detroit, USA, August 4-8, 2011.

10   Rahman, H. & Ramos, I. (2011b). Empowerment of SMEs through Open Innovation Strategies: Life Cycle of Technology Management. *International Journal of Information Communication Technologies and Human Development (IJICTHD)*, Volume 3(3), July-September 2011

11   Rahman, H. (2010a). E-governance at the Grass Roots: SAARC Context. In *Proceedings of the 4th international Conference on theory and Practice of Electronic Governance* (Beijing, China, October 25-28, 2010). ICEGOV2010, Jim Davies and Tomasz Janowski (Eds.). ACM, New York, NY, USA, 21-30. DOI=10.1145/1930321.1930327

12   Rahman, H. (2010b). Information Retrieval under Constricted Bandwidth Situations. In *Proceedings of the International Conference on Computer Applications and Information Technology*, September 03, 2010, Coimbatore, Tamilnadu, India, 147-154

13   Rahman, H. & Ramos, I. (2010). Open Innovation in SMEs: From closed boundaries to networked paradigm. In *Proceedings of the Issues in Informing Science and Information Technology Education Conference*, Cassino, Italy June 19-24, 2010, 471-487

14   Rahman, H. (2009a). Framework of e-Governance at the Local Government Level. In *Proceedings of the 3rd international Conference on theory and Practice of Electronic Governance* (Bogota, Columbia, November 10-13, 2009). ICEGOV '09, vol. 322. ACM, New York, NY, 372-374.

15   Rahman, H. (2009b). Collaborative Learning: An Effective Tool to Empower Communities, *International Journal of Information Communication Technologies and Human Development (IJICTHD)*, Volume 1(2), January - March 2009, pp. 1-27

16   Rahman, H. (2009c) Local E-Government Management: A Wider Window of E-Governance, *International Journal of Information Communication Technologies and Human Development (IJICTHD)*, Volume 1(2), January - March 2009, pp. 48-76

17   Rahman, H. (2007). E-government readiness: from the design table to the grass roots. In *Proceedings of the 1st international Conference on theory and Practice of Electronic Governance* (Macao, China, December 10 - 13, 2007). ICEGOV '07, vol. 232. ACM, New York, NY, 225-232.

18   Rahman, H. (2006). ICT Mediated Learning for Socio-Economic Empowerment, *A proceedings of the 4th Pan-Commonwealth Forum on Open Learning (PCF4)*, Commonwealth Open Learning (COL), Jamaica, October 30-November 3, 2006.

19   Rahman, H. (2004a). Empowering Marginal Communities with Interactive Education Systems, *A proceedings of the 3rd Pan-Commonwealth Forum on Open Learning (PCF3)*, Commonwealth Open Learning (COL), Dunedin, New Zealand, July 4-8, 2004.

20   Rahman, H. (2004b). Role of ICT in Creating e-Government for the Disadvantaged Communities, *7th International Conference on Business Information Systems (BIS2004)*, Poznan, Poland, April 21-23, 2004.

21   Rahman, H. (2004c). Utilizing ICT for Sustainable Development in Developing Countries, *18th European Conference on Modern South Asian Studies Network (SASNET),* Lund, Sweden, July 6-9, 2004.

22   Rahman, H. (2003). Distributed Learning Sequences for Future Generation, a paper in the Closing Gaps in theDigital Divide, Regional Conference on Digital Divide, February 26-28, 2003,Asian Institute of Technology, Bangkok, Thailand.

23   Rahman, H. (2002a). Community based Disaster Information Management System: perspective Bangladesh, a paper in the Regional Workshop on Best Practices in Disaster Mitigation: Lessons Learned from the Asian Urban Disaster Mitigation Program and other initiatives, September 24-26, 2002, Hotel Padma, Bali, Indonesia.

24   Rahman, H. (2002b). Knowledge Networking for the un reached, a paper at the IT Conference Nepal, January 26-27, 2002, BICC, Kathmandu, Nepal, Website: http://www.itconference.org.np

25   Rahman, H. (2001a). Initializing Internet Rights for the Unreached, a paper at the 1st Asia Internet Rights Conference, November 8-10, 2001, Seoul, Korea, Website: http://www.jinbo.net

26   Rahman, H. (2001b). Adhering to the innovative IT policies in a developing society: perspective Bangladesh, a paper at the 2001 Internet Political Economy Forum (IPEF2001), September 14-15, 2001, National University of Singapore, Singapore, Website: http://www.ipeg.org

27   Rahman, H. (2001c). Utilization of ICT Infrastructure for Collaborative Learning through Community Participation", a paper at the IFUP2001, 4th International Forum on Urban Poverty, October 16-19, 2001, Marrakech, Morocco, Website: http://www.ifup.org

28   Rahman, H. (2001d). Spreading Distance Education through Networked Remote Information Centres, a paper at the ICIMADE2001, International Conference on Intelligent Multimedia and Distance Education, June 1-3, 2001, Fargo, ND, USA, Website: http://www.venus.ece.ndsu.nodak.edu/ece/research/conferences/icimade01

29   Rahman, H. (2001e). Introducing Interactive Multimedia Methods in Computer Application Course of Bangladesh Open University, a paper at the IRMA2001, Information Resources Management Association International Conference, May 20-23, 2001, Toronto, Ontario, Canada, Website: http://www.irma-international.org

30   Rahman, H. (2001f). Information Networking Through Distributed Nodes Sharing Minimum Bandwidth, a paper at ICACT2001 conference, The 3rd International Conference on Advanced

31   Communication Technology, February 6-8, 2001, Muju Resort, South Korea, Website: http://icact.nca.or.kr/2001

32   Rahman, H. (2001g). Network within Network for extension of Distance Education and Human Resource Development, a paper at CATA2001, the ISCA 16th International Conference on Computers and the Applications, March 28-30, 2001, WestCoast Grand Hotel, Seattle, Washington, USA, Website: http://www.isca-hq.org

33   Rahman, H. (2001h). Network Security in a Wide Area Network: A Trade Off Between Expenses and Reliability", a paper in the proceedings of APRICOT2001, the Association of the Computer and Multimedia Industry of Malaysia, February 26- March 2, 2001, Kuala Lumpur, Malaysia, Website: http://www.pikom.org.my

34   Rahman, H. (2001i). Internet in Bangladesh: Millennium Perspective, a paper in the proceedings of the IT Conference: CAN Info Tech 2001, Computer Association of Nepal, January 27-28, 2001, Kathmandu, Nepal, Website: http://www.caninfo.org

35   Rahman, H. (2001j). Replacing Tutors with Interactive Multimedia CD in Bangladesh Open University: A Dream or a Reality.", a paper in the 20th World Conference on Open Learning and Distance Education, April 01-05, 2001, Dusseldorf, Germany, http://www.icde.org/

36   Rahman, H. (2000a). Extending Multimedia Resources to Dhaka Regional Resource Centre of Bangladesh Open University. a paper in the ICDE-ASIAN Regional Conference 2000, November 3-5, 2000, Indira Gandhi National Open University, Delhi, India, http://www.ignou.org

37   Rahman, H. (2000b). A Computer Mediated Teaching and Learning Scheme for Bangladesh Open University, a paper in IRMA2000 (11th International Conference of the Information Resources Management Association, May 21-24, 2000, Anchorage, Alaska, USA.

38   Rahman, H. (2000c). Interactive Multimedia Technology for Distance Education in Bangladesh Open University (BOU)" a paper in ISCA 15th INTERNATIONAL CONFERENCE ON COMPUTERS AND THEIR APPLICATIONS (CATA-2000), March 29-31, 2000, New Orleans, Louisiana, USA, Website: http://www.isca-hq.org/confr.htm

39   Rahman, H. (2000d). Application of Information Technology in Rural Community based Distance Education: Bangladesh Open University Concept, a paper in 7th Annual Conference of Indian Distance Education Association (IDEA), April 27-29, 2000, New Delhi, India, Website: http://www.ignou.org/idea2000

40   Rahman, H. (2000e). Introduction of Interactive Multimedia CD-ROM in Distance Education: perspective:- Bangladesh Open University. a paper in the 1st Conference on Research in Distance & Adult Learning in Asia [CRIDALA], June 21-24, 2000, the Open University of Hong Kong, http://www.ouhk.edu.hk/cridal/cridala/

41   Rahman, H. (2000f). Sustainable Development Information Networking in Bangladesh", a paper in the Electronic Conference on Sustainable Development Information Systems, June 19-28, 2000, CEDARE-Centre for Environment and Development for the Arab Region & Europe, Cairo, Egypt, networking at http://www.cedare.org.eg/events/sdis/papers.htm

42   Rahman, H. (2000g). A Turning Point Towards the Virtuality, the Lone Distance Educator: Compromise or Gain", a paper in the Learning 2000: Reassessing the Virtual University Conference, September 27-30, 2000, Hotel Roanoke Conference Centre, Virginia Tech., USA, http://www.cddc.vt.edu/learning

43   Rahman, H. (2000h). Integration of Adaptive Technologies in Building Information Infrastructure for Rural Based Communities in Coastal Belt of Bangladesh", a paper in the First Conference of the Association of Internet Researchers,September 14-17, 2000, University of Kansas, Lawrence, KS, USA, http://www.cddc.vt.edu/aoir

44   Rahman, H. (2000i). Establishment of Virtual Information Centres at Cyclone Shelters in Bangladesh Coastal Belts", a paper in the First International Conference on Wastewater Treatment and Reuse adapted to Mediterranean Area, October 25-28, 2000, Tunis City, Tunisia, http://www.fortunecity.com/marina/seafarer/1107/program.html

45 Rahman, H. (1999a). Distance Education in Bangladesh: Prospects, Present Status and Future using IT Methods and Techniques to Reach Remote Rural Based Students, A paper at the Professional Development Online Conference, April 21 to April 23, 1999, Honululu, Hawaii, USA, Web page: http://www.hcc.hawaii.edu/~doug/

46 Rahman, H. (1999b). Adoption of IT Methods in Distance Education: Perspective- Bangladesh Open University , A paper at the 19th World Conference on Open Learning and Distance Education, Vienna, June 20-24, 1999, ICDE-International Council for Open and Distance Education, Web page: http://www.icde.org/

47 Rahman, H. & Rahman, S.M. (1999). Interactive Multimedia Technology for Distance Education in Bangladesh Open University , A paper at the ISIMADE'99 International Symposium on Intelligent Multimedia and Distance Education in conjunction with the 11th International Conference on Systems Research, Informatics and Cybernetics, August 2-7, 1999 in Baden-Baden, Germany, Webpage: http://venus.ece.nsdu.nodak.edu/ece/research/conference/isimade/

Contributed Book Chapters:

1. Rahman, H. (2013a). Data Mining techniques to Improve Early Warning Systems across the Bay of Bengal: A Bangladesh Perspective, In Rahman, H. & Ramos, I. (2013) (Eds.), Ethical Data Mining Applications for Socio-Economic Development, IGI-Global, pp. 53-87.
2. Rahman, H. (2013b). Data Mining Algorithms for Measuring performance Impact of Social Development Processes: Ethical Implications, In Rahman, H. & Ramos, I. (2013) (Eds.), Ethical Data Mining Applications for Socio-Economic Development, IGI-Global, pp. 148-162.
3. Rahman, H. (2013c). Open Innovation in SMEs: From Closed Peripheries to Networked Paradigm, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 160-174
4. Rahman, H. (2013d). Open Innovation: Opportunities and Challenges for SMEs, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 1521-1534.
5. Rahman, H. (2013e). Stages of e-Government maturity models: Emergence of e-Governance at the grass roots. In: Bwalya, K.J. (Ed.). Technology Development and Platform Enhancements for Successful Global E-Government Design, IGI Global
6. Rahman, H. (2013f). Innovation in Learning and Rise of the Internet: Grassroots Human Development. In: Al-Hakim, L. (Ed.). Quality Innovation: Knowledge, Theory and Practices, IGI Global
7. Rahman, H, and Ramos, I. (2013a). Research and Practices on Open Innovation: Perspectives on SMEs, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 175-197.
8. Rahman, H, and Ramos, I. (2013b). A Research Model for Open Innovation: Synthesizing Opportunities and Challenges Surrounding SME, Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 258-280.
9. Rahman, H, and Ramos, I. (2013c).Open Innovation Strategies in SMEs: Development of a Business Model, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 281-293.
10. Rahman, H, and Ramos, I. (2013d).Open Innovation in SMEs of Developing and Transitional Economies, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 944-962.
11. Rahman, H, and Ramos, I. (2013e).Trends of Open Innovation in Developing Nations: Contexts of SMEs, In. Small and Medium Enterprises: Concepts, Methodologies, Tools, and Applications (4 Volumes), Information Resources Management Association (USA), pp. 1805-1820.

12. Rahman, H, and Ramos, I. (2013f). Open Innovation in SMEs: Prospects and Challenges. In: Devos, J., Van Landeghem, H., & Deschoolmeester, D. (Eds.). Information systems and small and medium-sized enterprises (SMEs): state of art of IS research in SMEs. Springer-Verlag Berlin Heidelberg.

13. Rahman, H. (2012a). Community Practices to Improve E-Governance at the Grass Roots, In Rahman, H. (Ed.). Cases on Progressions and Challenges in ICT Utilization for Citizen-Centric Governance, IGI-Global, pp. 134-179.

14. Rahman, H. (2012b). Capacity Development Initiatives for Grass Roots Communities: Two Cases, In Rahman, H. (Ed.). Cases on Progressions and Challenges in ICT Utilization for Citizen-Centric Governance, IGI-Global, pp. 69-104.

15. Rahman, H. (2011a). E-governance at the grass roots: Observations at the SAARC Perspective, In: *Strategic Enterprise Resource Planning Models for E-Government: Applications and Methodologies,* Editors Susheel Chhabra and Muneesh Kumar, IGI Global, 2011, p. 125-142.

16. Rahman, H. (2011b). Capacity Development Initiatives for Grass Roots Communities: Two Cases. In: Cases on Adoption, Diffusion and Evaluation of Global E-Governance Systems: Impact at the Grass Roots, IGI Global, 2011, ISBN13: 9781616928148, p. 79-106

17. Rahman, H. (2011c). Community Practices to Improve E-Governance at the Grass Roots. In: Cases on Adoption, Diffusion and Evaluation of Global E-Governance Systems: Impact at the Grass Roots, IGI Global, 2011, ISBN13: 9781616928148, p. 1-34

18. Rahman, H. & Ramos, I. (2011a). Open Innovation in SMEs of developing and transitional economies. In: *Strategic and Pragmatic E-Business: Implications for Future Business Practices,* Editor Karim Mohammed Rezaul, IGI Global

19. Rahman, H. & Kumar, S. (2011b). Mobile Computing: An emerging issue in the digitized world. In: Mobile Computing Techniques in Emerging Markets: Systems, Applications and Services, IGI Global

20. Rahman, H. & Ramos, I. (2011c). Trends of Open Innovation in Developing Nations: Contexts of SMEs. In: Cases on SMEs and Open Innovation: Applications and Investigations, IGI Global, pp. 65-80.

21. Rahman, H. & Ramos, I. (2011d). Research and Practices on Open Innovation: Perspectives SMEs. In: *SMEs and Open Innovation: Global Cases and Initiatives*, IGI Global

22. Rahman, H. & Ramos, I. (2011e). Open Innovation Strategies in SMEs: Development of a Business Model. In: *SMEs and Open Innovation: Global Cases and Initiatives*, IGI Global

23. Rahman, H. & Ramos, I. (2011f). A Research Model for Open Innovation: Synthesizing Opportunities and Challenges Surrounding SMEs. In: *SMEs and Open Innovation: Global Cases and Initiatives*, IGI Global

24. Rahman, H. (2010a). Framework of E-governance at the Local Government Level. In C.G. Reddick (Ed.). *Comparative E-Government: Integrated Series In Information Systems*, 2010, Volume 25, Part 1, pp. 23-47, DOI: 10.1007/978-1-4419-6536-3_2, Springer, 2010

25. Rahman, H. (2010b). Open Innovation: Opportunities and Challenges for SMEs. In *E-Business Issues Challenges and Opportunities for SMEs: Driving Competitiveness*, Editors Maria Manuela Cruz-Cunha & João Eduardo Varajão, IGI Global, 2010, ISBN: 978-1-61692-880-3, p. 87-100

26. Rahman, H. (2010c). Open Innovation in SMEs: From closed peripheries to networked paradigm. In *E-Business Issues Challenges and Opportunities for SMEs: Driving Competitiveness*, Editors Maria Manuela Cruz-Cunha & João Eduardo Varajão, IGI Global, 2010, ISBN: 978-1-61692-880-3, p. 373-393

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28. Rahman, H. (2009b). Collaborative Learning: An Effective Tool to Empower Communities. In *Handbook of Research on E-Government Readiness for Information and Service Exchange: Utilizing Progressive Information Communication Technologies,* Publisher: Information Science Publishing, USA, July 2009, ISBN: 978-1-60566-671-6, p. 209-237; In: Susheel Chhabra and Hakikur Rahman (Eds.) Human Development and Global Advancements through Information Communication Technologies: New Initiatives, IGI Global, 2011, p. 75-103

29. Rahman, H. (2009c). Collaborative Learning: Knowledge beyond the peripheries, In *Adult Learning in the Digital Age: Perspectives on Online Technologies and Outcomes*, edited by Terry Kidd, Idea Group Inc., USA, ISBN13: 9781605668284, 2009: 81-88

30. Rahman, H. (2009d). Electronic Payment Systems in Developing Countries for Improved Governance System. In *Social and Political Implications of Data Mining: Knowledge Management in E-Government*, Publisher: Information Science Publishing, USA, February 2009, ISBN: 978-1605662312, pp. 126-149

31. Rahman, H. (2009e). Knowledge Management Portals for Empowering Citizens and Societies. In *Social and Political Implications of Data Mining: Knowledge Management in E-Government*, Publisher: Information Science Publishing, USA, February 2009, ISBN: 978-1605662312, pp. 42-63

32. Rahman, H. (2008a). Prospects and Scopes of Data Mining Applications in Social Development Activities. In *Data Mining Applications for Empowering Knowledge Societies,* Idea Group Inc., USA, ISBN 978-1-59904-657-0, May 2008, pp. 162-188

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35. Rahman, H. (2008d). Interactive Multimedia technologies for Distance Education Systems, In Online and Distance learning: Concepts, Methodology, Tools and Applications, edited by Tomei, L., IGI Global, 2008: 1157-1164

36. Rahman, H. (2007a). An Overview on Strategic ICT Implementations Toward Developing Knowledge Societies. In Developing Successful ICT Strategies: Competitive Advantages in a Global Knowledge-Driven Society, Idea Group Inc., USA, ISBN 978-1-59904-654-9, August 2007, pp.

37. Rahman, H. (2007b). Information Dynamics in developing Countries, In Managing Information Communication Technology Investments in Successful Enterprises, edited by Lubbe, S., Idea Group Publishing, 2007, pp. 79-93

38. Rahman, H. (2006a). Role of ICTs in Socioeconomic Development and Poverty Reduction. In Information and Communication Technologies for Economic and Regional Developments, Idea Group Inc., USA, ISBN 1-59904-186-3, December 2006, pp. 180-219

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2   Rahman, H. & Ramos, I. (Eds.) (2013). *Ethical Data Mining Applications for Socio-Economic Development*, co-edited with Dr. Isabel Ramos, IGI Global, USA, May 2013, ISBN13: 9781466640788.
3   Rahman et. al., (Eds.) (2012). *Knowledge and Technologies in Innovative Information Systems: 7th Mediterranean Conference on Information Systems, MCIS 2012*, Guimaraes, Portugal, September 8-10, 2012, Proceedings, LNBIP129, Springer, co-edited with Dr. Anabela Mesquita and Dr. Isabel Ramos
4   Rahman, H. (2012). *Cases on Progressions and Challenges in ICT Utilization for Citizen-Centric Governance*, IGI Global Reference book, , IGI Global, USA, September, 2012. ISBN13: 9781466620711.

5   Kumar, A.V.S. & Rahman, H. (Eds.) (2011). *Mobile Computing Techniques in Emerging Markets: Systems, Applications and Services,* co-edited with Dr. A.V. Senthil Kumar*,* IGI Global, USA, November 2011**,** ISBN13: 9781466600805.

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7   Rahman, H. & Ramos, I. (Eds.) (2011a).*Cases on SMEs and Open Innovation: Applications and Investigations, co-edited with Dr. Isabel Ramos,* IGI Global, USA, November 2011**,** ISBN13: 9781613503140.

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13   Rahman, H. (Ed.) (2008). *Selected Readings on Global Information Technology: Contemporary Applications*, Publisher: Information Science Reference, USA, August 2008, ISBN: 978-1605661162, 516pp.

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15   Rahman, H. (Ed.) (2006). *Information and Communication Technologies for Economic and Regional Developments*, Idea Group Inc., USA, ISBN 1-59904-186-3, December 2006, 300pp.

16   Rahman, H. (Ed.) (2005). *Empowering Marginal Communities with Information Networking*, Idea Group Inc., USA, ISBN 1-59140-699-3, November 2005, 363pp.

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1   Ramos, I. & Rahman, H. (2014). Crowdsourcing for Innovation and Empowerment in SMEs, co-authored with Dr. Isabel Ramos, IGI Global, USA to be published in 2014

2   Harekrishna, M. & Rahman, H. (2013). Managing Enterprise Information Technology Acquisitions: Assessing Organizational Preparedness, co-authored with Dr. Harekrishna Misra, IGI Global, USA, June 2013, ISBN13: 9781466642010.

3   Rahman, H. (2011). e-Governance Framework at the Local Government Level: Empowerment of Community People and Improvement of e-Governance at the Grass Roots, VDM Publishing House Ltd., 2011

4   Rahman, H. (2010). Large-Scale Information Dissemination in Congested Bandwidth over Dynamically Distributed Wide Area Networks exposed to Web Database Systems, VDM Publishing House Ltd., 2010

5	Rahman, H. (2006). Design and Implementation of a Token Ring Local Area Network Interface, ME Thesis, American University of Beirut, 368 pp. Available at http://books.google.com/books?id=wMxFMwEACAAJ
6	Rahman, H. & Rahman, A. (1998). Pond Book, Prepared for the Jamuna Multipurpose Bridge Authority, Directorate of Fisheries, Ministry of Fisheries and Livestock, 1998. 100pp.
7	Rahman et. al., (1998). Introduction to Computer and its use, Bangladesh Open University, ISBN 984-34-5026-4, 1998. (Bangla). 156pp.
8	Rahman, H. (1993). Computer Jagat publications-6: Troubleshooting Assistant, Computer Jagat, 1993. (Bangla). 38pp.
9	Rahman, H. (1993). Introduction to Personal Computer series-2: Wordperfect, ICMS, 1993. (Bangla). 126pp.
10	Rahman, H. (1992). Introduction to Personal Computer series-1: Wordstar, ICMS, 1992. (Bangla). 90pp.

(plus seven instructional books in English on Introduction to Personal Computer series on dBASE, dBASE Programing, foxBASE, foxBASE Programing, C++, BASIC, and FORTRAN for ICMS during 1989 to 1996).

Other activities in academic, publication and research:

Chief Editor:

- International Journal of Information Communication Technology for Human Development (IJICTHD) (http://www.igi-global.com/journal/international-journal-information-communication-technologies/1101),
- Advances in Social Networking and Online Communities (ASNOC) Book Series (http://www.igi-global.com/publish/call-for-papers/call-details/867), and
- Advances in Knowledge Communities and Social Networks (AKCSN) Book Series from 2008-2012 (http://www.igi-global.com/book-series/advances-knowledge-communities-social-networks/37168).

Special Issue Editor:

- Volume-5 Issue-1 of IJICTHD 2013-Special Issue on Information Communication Technologies for Open Business- Part2 (Co-guest editor, Dr. Isabel Ramos)
- Volume-3 Issue-3 of IJICTHD 2011- Special Issue on Open Innovation Strategies for SMEs Development: Utilization of ICT methods (Co-guest editor, Dr. Isabel Ramos)
- Volume-1 Issue-2 of IJICTHD 2009- Special Issue on enhancing the human capacities through collaborative learning

Conference Organizer:

- Organized more than twenty national and international conferences during the tenure of the SDNP-UNDP (1999-2007) as the national project coordinator. Among them, APNIC, APAN, e-Health (EU project), and development gateway (WB project) are notable.

Others:

- Editor, Monthly Computer Bichitra, Bangladesh since 1990;
- Head Examiner (Computer), Bangladesh Technical Education Board (1996-2008);
- Member of the International Editorial Advisory Board (EAB) of the *Advances in Electronic Government Research (AEGR)* Book Series (2005-2012);
- Member of the International Review Board Member of *International Journal of Doctoral Studies (IJDS)* (2006-2009);
- Reviewer for the Editorial Reviewer Board of the *International Journal of E-Government Research (IJEGR)*;
- Special Issue Editor for the *Journal of Electronic Commerce and Organizations (JECO)*;
- Ad Hoc reviewer for the Editorial Review Board of the *Information Resources Management Journal* (IRMJ) (2006-2013);
- Reviewer of *Journal of Environment and Development (JED)*;
- Reviewer of EEET (2008-2009), EISTA (2005-2013), CITSA (2005-2013), InSITE (2009-2013), IADIS (2004-2013);
- Director of the Informing Science Institute (2004-2006); and
- Programme Committee member of several international conferences- 18th APAN Meetings/QUESTnet 2004 in Cairns, Australia; 19th APAN Meetings in Bangkok, Thailand-2005; International Association for Development of the Information Society (IADIS)- 2004-2013; Informing Science Institute (InSITE)- 2005-2013; International Conference on Computer Applications and Information Technology- 2010; International Business Information Management Association (IBIMA)-2010) and other events.
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Hakikur Rahman

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Courses Taught

Title: Quantitative Research in Information Systems Technology (QRIST)

Instructor: Hakikur Rahman

Class hours: Friday 3 hours (2+1)

Duration: 8 weeks

Course for first year PhD students

Course description:

This course intends to prepare doctoral students in understanding the nature, assumptions and logic of quantitative research methodologies. The course will focus on issues related to design, concepts, analysis, interpretation, and evaluation of quantitative research procedures for information systems and technologies research.

Its major objective is to enable students to design information systems research, experiments and surveys including quantitative analytical parameters. Students will work in teams on an original research paper and will be expected to submit a short research paper. Research articles selected from a variety of research paradigms will be used throughout the course, addressing a diversity of IST topics.

Learning objectives:

Students will be expected to:
- Understand the nature of quantitative procedures
- Become familiar with quantitative research designs, and array of concurrent methods, to understand their uses, strengths, and limitations.
- Identify various ways of collective quantitative data (survey, cross-sectional, longitudinal, etc.)
- Have a working knowledge on data analysis and strengths of various techniques
- Understand how to summarize, compile, interpret and report quantitative data
- Evaluate a research paper that reflects knowledge of quantitative methods in a research design.

Evaluation and Course Activities

1. Class attendance, participation- 25%
   (Regular attendance and active participation in the discussions)
2. Class exercise and Home work- 25%
   (Responses to question and answer sessions, and tasks assigned for home)
3. Short Paper on a Specific Method- 25%
   (Critiquing a specific paper in terms of research methodology, analytical aspect, strengths and weaknesses, interpretation, or further improvement)
4. Evaluating the Research Paper- 25%
   (A 2-4 pages short paper. Could be an extension of item three above, or a separate paper on theme of team interest)

Week 1: Introduction, course overview, research topics
(No reading)

Introduction and course overview
Identification of a possible research topics

Week 2: IST Research Overview
(definition, concept, overview)

Readings:
- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008). *The Research Methods Knowledge Base*, Chapter-1. (http://www.atomicdog.com, or http://www.socialresearchmethods.net/kb/index.php) (Language of Research, Philosophy of Research, Ethics in Research, Conceptualizing)

Sample empirical paper (for discussion):
- Paper-1: Dennis, A.R. & Valacich, J.S. (2001). Conducting Research in Information Systems, *Communications of the AIS*, 7, Article 5, July 2001.

Additional recommended readings (Home work):
- Paper-5: Banker, R.D. & Kauffman, R.J. (2004). The Evolution of Research on Information Systems: A Fiftieth-Year Survey of the Literature in Management Science. *Management Science*, 50(3), March, 281-298. (**Question- find the most suitable research topics of your interest; justification preferred**)

Week 3: IST Research Methodologies
 (cross-sectional research vs. longitudinal research, from conceptualization to operationalization, choosing proper method)

Readings:
- Reading_1-Paper-7:Quantitative Positivist Research Methods in Information Systems (http://dstraub.cis.gsu.edu:88/quant; Please read the following links: Welcome, Philosophical Perspectives, General Research Approaches).
  http://ais.affiniscape.com/displaycommon.cfm?an=1&subarticlenbr=495
  http://beginner-invest.com/the-handbook-of-information-systems-research/
  http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1366962

- Paper-6: Palvia, P., E. Mao, A.F.Salam, & K.S. Soliman. (2003). Management Information Systems Research: What's there in a Methodology? *Communications of the AIS*, 11, 289-309.

Sample empirical paper (Home work):
- Reading_1: Williams, C. (2007). Research Methods, *Journal of Business and Economic Research*, 5-3:65-72 (**Question- find five most favored research methods in IST in recent days; references preferred**)

Additional recommended readings (Optional):
- Paper-7: Lei Li (2007). Section-1.4, Generating user-centric Dynamic and Adaptable Knowledge Models for World Wide Web, PhD Dissertation, Georgia State University

- Working_paper_2: Caplinskas, A. & Vasilecas, O. (2004). Information systems research methodologies and models, *International Conference on Computer Systems and Technologies - CompSysTech'2004,* IV.4-1- 6.

Week 4: Measure instruments, Reliability, Validity
(ensuring reliability and validity, data collection- secondary data collection, identifying sources of data, ensuring reliability and validity- putting secondary data in its proper context, referencing and citation, data treatment, coding and data input, data validation, pre-analysis)

Readings:
- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008)1. *The Research Methods Knowledge Base*, Chapter-3. (http://www.atomicdog.com, or http://www.socialresearchmethods.net/kb/index.php)
  (Construct validity, reliability, levels of measurement; conclusion validity- Analysis)

- ADDITIONAL-Book-2: Devellis, R.F. (2003). *Scale Development: Theory and Applications*, Sage Publications Inc. Chapters 1, 2, 3 & 4;
  http://books.google.com/books?id=BYGxL6xLokUC&printsec=frontcover

Sample empirical paper (Homework):
- Reading_1-Paper-7:Quantitative Positivist Research Methods in Information Systems (http://dstraub.cis.gsu.edu:88/quant; Please read the following link: Issues of measurement).

Additional recommended readings (Optional):
- R-Paper-8: Nunnally, J.C., and Bernstein, I.H. (1994). *Psychometric Theory*, New York: McGraw Hill, Chapter 3.

- V-Paper-13: Bagozzi, R.P., Yi, Y., and Phillips, L.W. (1991). Assessing Construct Validity in Organizational Research, *Administrative Science Quarterly, 36*, 421-458.

- OPTIONAL-Paper-15: Petter, S., Straub, D. & Rai, A. (n.d.). Specification and validation of Formative Constructs in IS Research (A working paper)

Week 5: Survey techniques, Questionnaire design
(compiling themes, identifying dependent and independent variables, measurements and scales, questionnaire design, pilot testing and refining)

Readings:
- QD-Paper-12: Practical guide for better questionnaires

- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008)1. *The Research Methods Knowledge Base*, Chapter-3.4 (http://www.atomicdog.com, or http://www.socialresearchmethods.net/kb/index.php) (Types of surveys, selecting the survey method, constructing the survey, interviews, plus and minus of survey methods)

Sample empirical papers (Homework):

- ST-Working_paper-5: Pervan, G. & Cecez-Kecmanovicb, D. (2001). The Status of Information Systems Research in Australia: Preliminary Results, *Proceedings of the Twelfth Australasian Conference on Information Systems*

Additional recommended readings:
- Book-3: Bradburn, N.M., Sudman, S. & Wansink, B. (2004). Asking questions: the definitive guide to questionnaire design : for market research, political polls, and social and health questionnaires, John Wiley and Sons; http://books.google.com/books?id=YXKbTx2j9i4C&printsec=frontcover

- ADDITIONAL-Book-4: Fowler, F. (2002). *Survey Research Methods*, Sage Publications Inc. Chapters 1, 4, and 5; http://books.google.com/books?id=72pHgjvNS5gC&printsec=frontcover

- Paper-10: Sally Barnes (2001). Questionnaire Design and Construction, Institute for Learning and Research Technology

- QD-Paper-11: James L. Esposito (2002). A Framework Relating Questionnaire Design and Evaluation Processes to Sources of Measurement Error

Week 6: Sampling, Data collection techniques
(identifying units of analysis, using lists and databases, sampling theory- different methods and techniques)

- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008). *The Research Methods Knowledge Base*, Chapter 2. (http://www.atomicdog.com, or http://www.socialresearchmethods.net/kb/index.php)
- Reading_1-Paper-7:Quantitative Positivist Research Methods in Information Systems (http://dstraub.cis.gsu.edu:88/quant; (Please read the following link: Data Collection Techniques).
- ADDITIONAL-Book-5: Ross, K.N. (2005). (Ed.) *Sample design for educational survey research*, Quantitative Research Methods in Educational Planning, UNESCO.

Sample empirical paper (Homework):
- Paper-19: Charles Teddlie and Fen Yu (2007). Mixed methods sampling: a typology with examples, *Journal of Mixed Methods Research* 2007, 1-1:77-100

Additional recommended readings (Optional):
- Book-4: Fowler, F. (2002). *Survey Research Methods*, Sage Publications Inc. Chapter 2. http://books.google.com/books?id=72pHgjvNS5gC&printsec=frontcover

- Book-6: Sekeran, U. (2000). Research Methods for Business: A Skill-Building Approach, 3rd edition, Wiley, Chapter 11

- Paper-20: Scheuren, F. (2004). What is a Survey? (Booklet)

Week 7: Data analysis techniques
(inferential statistics- probability theory, hypothesis testing (z-test, t-test), anova, chi-square, u-test, h-test; advanced statistics- cluster analysis, factor analysis, conjoint analysis)

Readings:
- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008). *The Research Methods Knowledge Base*, Chapter 5. (http://www.atomicdog.com, or http://www.socialresearchmethods.net/kb/index.php) (Conclusion validity, Data preparation, Descriptive statistics, Inferential statistics)

- Reading_1-P7_Quantitative Positivist Research Methods in Information Systems (http://dstraub.cis.gsu.edu:88/quant; (Please read the following links: Data Collection Techniques, Data Analysis Techniques).

Sample empirical paper (Homework):
- Paper-22: Ololube, N.P. (2007). The relationship between funding, ICT, selection processes, administration and planning and the standard of science teacher in Nigeria, Asia Pacific Forum on Science Learning and Teaching, 8-1:1-29

Additional recommended readings:
- Reading-2: http://www.itl.nist.gov/div898/handbook/ (Chapter-3: section 3 & 4)

- OPTIONAL-Book-6: Uma Sekeran (2000). Research Methods for Business: A Skill-Building Approach, 3rd edition, Wiley, Chapter 12

Week 8: Evaluation of IST research

Readings:
- Book-1: Trochim, W.M.K. & Donnelly, J.P. (2008). *The Research Methods Knowledge Base*, Chapter-1.5 (http://www.atomicdog.com, or
 http://www.socialresearchmethods.net/kb/index.php)
(Evaluation research)

- Paper-23: Eric L. Dey and Joseph M. Fenty (u.d.). Instruments and tools of evaluation

Sample empirical paper (Homework):

- Report_1: Meta-study on lessons from existing evaluations as an input to the Review of EU spending, European Commission, 2008

- Report_2: Young People and Emerging Digital Services: An Exploratory Survey on Motivations, Perceptions and Acceptance of Risks, Institute for Prospective Technological Studies, 2009

Writing:
- A 2-4 short paper focusing a specific research topics

<p style="text-align:center">Title: Open Innovation Utilizing ICT (OIICT)</p>

Instructor: Hakikur Rahman

Class hours: Saturday 3 hours (2+1)

Duration: 15 weeks (9+6)

Course for final year Masters students

Course description:

Open Innovation is an innovation approach that can be used to describe how nowadays companies source and exploit new technologies, products, process, services and business models. Internet technologies, Web 2.0, or Web-Based Intermediaries (WBIs) have entered the emerging innovation market and dramatically increased the number of innovation exchanges. However, there is a lack on appropriate theoretical guidelines supporting the design and management of interfaces in between organizations and end users, such as clients, or suppliers, or other companies. Open innovation process combines internal and external ideas into architectures and systems, and its business model utilizes that combination of ideas to create value. The course will guide learning efforts towards the exploration of this uncharted arena of organizational development through utilizing ICT.

Learning objectives:

Students will be expected to:
- LO1: Describe the meaning of open innovation (OI);
- LO2: Analyze critically OI strategies, their uses, strengths, and limitations;
- LO3: Discuss various business models that can be applicable to organizational aspect through using of ICT;
- LO4: Understand the role of Intellectual Property for Open Innovation strategies;
- LO5: Understand the role of knowledge and value networks in the successful implementation of OI strategies;
- LO6: Propose an OI strategy for a real situation case.

Evaluation and Course Activities

    1. Class attendance, participation- 20%
(Regular attendance and active participation in the discussions)
2. Class exercise and Homework- 40%
(Responses to question and answer sessions, and tasks assigned for home)
3. Team Assignment- 40%

Syllabus:

Week 1: Background and overview
Definition of Open Innovation (OI), concept, and overview of perspectives

Week 2: OI Strategies
 Contemporary researches, issues, applications, and success cases.

Week 3: The various business models
Discussion on various business models, their potentials and risks

Week 4-5: Application of ICT
Possible tools and techniques of applying OI strategies using ICT

Week 6: Intellectual Property and Open Innovation
Exploring the main concerns on when and how to protect intellectual assets and the impacts of this protection on open business models

Week 7: Knowledge and value networks
Discussion of concepts, practices and examples

Week 8-9: The role of open innovation for the ICT sector
Exploring real cases of open innovation in the ICT sector in order to identify the most promising models of implementation and the potential of defining high value networks of innovation.

Week 10-15: Assignments and Evaluations
Team work on real case scenarios

Teaching Methodology

The teaching methodology was designed for students to develop practical skills on the various models of Open Innovation and the exploitation of ICT applications that promote their successful implementation, particularly in the industry sector in which they will most probably develop their professional career. The class discussions and the work to be performed during the individual study are thought to promote reflection on the potential and limitations of various models of open innovation. Group work will allow students to be confronted with the complexity inherent to the implementation of open innovation strategies in real organizational contexts.

Bibliography

Open Innovation: Researching a New Paradigm, Henry Chesbrough, Wim Vanhaverbeke, and Joel West (Editors), Oxford University Press, USA, 2006
Open Business Models: How to Thrive in the New Innovation Landscape, Henry Chesbrough Harvard Business Review Press; 2006
Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers, Alexander Osterwalder and Yves Pigneur, Wiley; 2010
Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era, Henry Chesbrough, Jossey-Bass; 2011
Service Innovation: How to Go from Customer Needs to Breakthrough Services, Lance Bettencourt, McGraw-Hill; 2010
Managing Innovation: Integrating Technological, Market and Organizational Change,   Joe Tidd and John Bessant, Wiley; 2009