

MOHAMMOD T. IRFAN

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Summary

Mohammad is interested in modeling education and knowledge systems. Mohammad has developed a global education model capable of studying the prospects of national achievements at various levels of education across different age cohorts and genders. The model, freely available as a sub-module of the open source International Futures global model (<http://www.ifs.du.edu>), can study the resources required and benefits obtained from educational achievements across various economic and social sectors under alternative assumptions about prices and expenditure on education as well as alternative trajectories of economic and population growth. At present Mohammad is a research fellow at the Frederick S. Pardee Center for International Futures where he is working alongside others to develop an integrated futures model representing various types of infrastructure systems including a knowledge infrastructure that comprises of education, R&D, ICT and domestic and international drivers of innovation.

Mohammad taught courses on forecasting and global development issues at the University of Denver and University of Colorado (Denver campus).

Personal Information

Mohammad was born on September 01, 1966 in Chittagong, Bangladesh. Mohammad is living in Denver, Colorado with my wife and our two young children.

Education

Ph. D. 2008. Josef Korbel School of International Studies, University of Denver, Denver, Colorado, USA.

Dissertation Title: *A Global Education Transition: Computer Simulation of Alternative Paths to Universal Basic Education.*

Fields and Concentration: International Economics; Quantitative Methods and Modeling for Policy Analysis; Technology Policy Planning and Management.

Passed with Distinction.

M.A. in International Studies from Josef Korbel School of International Studies, University of Denver, Colorado, USA (2001) with a GPA of 3.98

M.Sc. in Physics from Dhaka University, Dhaka, Bangladesh (1992) with a first class.

- Developed a Millennium Development Goals analysis tool for the International Futures System (IFs)
- Developed an interface for scenario analysis capability for IFs
- Developed a model transparency demonstration tool for IFs (capable of showing the forward and backward links from any model variable to all others by analyzing the model code)
- Developed a tool for integrating Vensim system dynamics models into IFs.
- Developed an interface for importing Excel Data to IFs
- Developed different types of graphical presentations (e.g., Millennium Development Goals' Analysis) for IFs output
- Helped port IFs to the World Wide Web using ASP.Net

- TERRA, A European Union Project Coordinated by RAND, Europe January, 2000 – Dec., 2003

Part of the University of Denver Team

TERRA was a project of the European Union for optimizing the contribution of Information Society Technologies to Sustainable Development. The TERRA project team coordinated by RAND Europe made extensive use of computer based modeling of socio-economic issues. Specific contributions include model documentation and cross-platform model integration.

Business, Information Technology and Administration

- General Motors Corp., Warren, MI, USA June - July 2000

Summer Intern

Designed training materials and demo modules for a modeling software (Consumer Values and Trends Analysis, CoVaTrA, an offshoot of IFs) used by GM Advanced Portfolio Exploration Group. Conducted training and demos both under supervision and independently.

- PRIP Trust, 59 A Satmasjid Road, Dhaka, Bangladesh March - September 1999

Coordinator, Information Technology

Designed Information Technology projects for PRIP (a Bangladeshi support NGO) and its clients. Developed a PMIS application with VB and Access for PRIP's partners. Maintained in-house LAN (25 User, NT 4.0) and set up, troubleshoot Internet and e-mail accounts for staff.

- Government of Bangladesh November, 1995 - March, 1999

Assistant Commissioner & Magistrate, Sylhet Collectorate, Sylhet

Mohammad joined Bangladesh Civil Service qualifying through a rigorous set of nationally competitive exams. As an Assistant Commissioner he lead various desks at the district administration. As a magistrate he adjudicated criminal cases assigned to his court by the District Magistrate. On a special assignment by the Deputy Commissioner (executive head of the district), designed and developed monitoring and evaluation database system for a literacy project of the government of Bangladesh.

- Development Planners and Consultants (DPC), Dhaka April, 1994 - August 1995

Computer Programmer and Analyst

Designed RDBMS for DPC clients, e.g., an Educational Management Information System for the Directorate of Primary Education, Government of Bangladesh under an ADB project. Designed survey forms and analyzed collected data with SPSS, MS Excel, Lotus 123 and Quattro Pro.

- Infoage Systems, Chittagong, Bangladesh Feb., 1992 - Feb., 1994

Systems Programmer

Provided software design and system support for various clients. Developed B/L and Container Tracking System for a shipping company, Material Requirement and Planning System for a Hat manufacturer etc. Installed and maintained a 10 user Novell Netware 3.11 LAN for a shipping company.

Computing Skills

Computer Languages

- Visual Basic Classic: Mohammad is actively involved in the ongoing visual interface and model development of International Futures System, a global computer simulation model developed in VB6 with MS Access and IFs native data files for data management. IFs is a very large application comprising a large GUI component and a model core. Mohammad also developed various VB6 applications before joining the IFs team.
- .net: Mohammad has familiarity to the .net framework and actively coded in ASP.net back in 2005 for some part of the migration of IFs Vb6 desktop version to a ASP.net web version.
- Mohammad has coded in Fortran, Pascal and C++ mostly for classroom projects.

Systems Modeling Applications

- Mohammad has developed models and taught model development using Vensim systems dynamic modeling application.
- Mohammad has familiarity with similar SD modeling applications, e.g., STELLA

Computerized Analysis/ Database/ Modeling:

- Mohammad has familiarity with GAMS
- Very strong spreadsheet skills; designed and used models with Excel; Used SPSS extensively
- Strong knowledge in theories and applications of relational database; designed database and reporting solutions using MS Access and SQL Server
- Designed reports from database using reporting software like Crystal Report

Web Design:

- Developed several static web sites

- Worked with ASP.Net during the conversion of International Futures System global model for Web
- Developed php/mysql based multi-lingual website for a Bengali Newspaper

Publications

- Irfan, Mohammad T. 2008. "A Global Education Transition: Computer Simulation of Alternative Paths in Universal Basic Education," Ph.D. dissertation presented to the Josef Korbel School of International Studies, University of Denver, Denver, Colorado. <http://www.ifs.du.edu/documents/reports.aspx>.
- Dickson, Janet R., Barry B. Hughes, and Mohammad T. Irfan. 2009. *Advancing Global Education*. Vol. 2 of the Patterns of Potential Human Progress series. Boulder, CO, and New Delhi, India: Paradigm Publishers and Oxford University Press.
- Hughes, Barry B., Mohammad T. Irfan, Haider Khan, Krishna Kumar, Dale S. Rothman, and José Roberto Solórzano. 2008. *Reducing Global Poverty*. Vol. 1 of the Patterns of Potential Human Progress series. Boulder, CO, and New Delhi, India: Paradigm Publishers and Oxford University Press.
- Hughes, Barry B. and Mohammad T. Irfan. (2007) Assessing Strategies for Reducing Poverty. *International Studies Review* 9 (4): 690-710.
- Dickson, Janet R., Mohammad T. Irfan and Barry B. Hughes. 2007. *Education and Human Development: Patterns of Potential Human Progress*. Paper presented at the 2007 Annual Conference of the Human Development and Capability Association, The New School, New York, New York, September 18-20, 2007.
- Irfan, Mohammad T. 2005. *Forecasting Educational Achievement Relative to Millennium Development Goals: Inadequacy of Financial Interventions in the Contexts of Under- capacity, Under-efficiency and Under-participation*. Paper presented at the panel titled "Thinking about the Future with the International Futures (IFs) Computer Simulation: Assorted Agendas" at the First Global International Studies Conference, Istanbul Bilgi University, Istanbul, Turkey, 24-27 August, 2005.

Professional Membership

- Member, International Studies Association

- Associate Member, Bangladesh Computer Society, Dhaka, Bangladesh (not sure about the current status of membership).

Awards and Scholarship

- Full Tuition Research Assistantship at the International Futures Project
- 1999-2001: Social Science Foundation Scholarship.
- 2001-2003: GSIS Scholarship at GSIS, University of Denver.
- Dhaka University scholarships at B.Sc. and M.Sc. level.
- Education Board Scholarship at Secondary, Higher Secondary level in Bangladesh.
- Primary (Elementary) education scholarship in Bangladesh

Extra Curricular Involvement – Leadership, Volunteering

- Sat in the Board of Advisors of the International Graduate Student Ambassador program for the Year 2005-2006 at the University of Denver, Denver, Colorado, USA
- Served as an ambassador in the International Graduate Student Ambassador Program for the Year 2004-2005 at University of Denver, Denver, Colorado, USA.
- Volunteering as a docent in the Denver Public Library, Denver, Colorado, USA from mid 2005.
- Serving as the Chairperson, Bangladesh Student Organization, University of Denver, Denver, Colorado, USA.
- Indoor Games Secretary in the Students Union of Shahidullah Hall, Dhaka University, Dhaka for one term.

References

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