Organizational and Individual Impacts of Information Technologies

Course # INSY 704

Fall 2012

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Organizational and Individual Impacts of Information Technologies

Few technologies have generated as much attention and have created as many debates as information technologies (IT) have. For example, scholars have debated over whether IT would lead to the end of work in general (Rifkin, *The End of Work*, 1995) and of middle management in particular (Leavitt and Whisler, 1958; Pinsonneault and Kraemer, 1993; 1997. 2002); would make the world flat (Friedman, 2005) and whether it would enrich or deskill work and lead to higher or lower productivity (Attewell and Rule, 1984; Pinsonneault and Rivard, 1998). This doctoral seminar addresses these issues by assessing the research conducted on IT and its effects on organizations, groups, and individuals. By the end of this seminar, students will have an understanding of the empirical research on IT and should be able to evaluate the quality of different studies and assess their respective contributions.

To achieve this, research on IT impacts conducted over the last 30 years is assessed at four levels: industrial structure, organizations, groups, and individuals. **At the industrial structure level**, research on the impacts of IT (i.e., e-commerce, EDI) on the importance of markets and hierarchies as inter-firm coordination mechanisms are assessed. Three main topics are discussed in the section on IT and **organizations**: IT impacts on organizational performance, IT impacts on structures (including form, virtual organization, virtual teams, and the number of employees), and IT impacts on organizational communications. At the **group** level, the research on the impact of IT on decision quality as well as on brainstorming is analyzed. Finally, the research on the IT impacts on **individuals** includes such topics as the productivity paradox and managerial work.

This seminar favors the in-depth analysis and understanding of topics rather than an overview of a large number of subjects. Students will be invited to actively participate in discussions and to present their thoughts on different topics.

Although this seminar relies essentially on the information systems literature, it is open to students of all fields who are interested in understanding how IT affects organizations and work. Further, some time will be devoted to discussing issues associated with the researcher’s job.

**Evaluation**

Presentations

Conducting one class (choose a class from weeks 4 to 12) 15%

Papers 85%

1. Epistemology of IT impact research: Analyze, compare, and contrast the Technological determinism, structuration theory, and the sensemaking approaches to studying IT consequences in organizations *(Submitted on week 4) (15 pages max)* 15%

2. Papers (3 pages) on weekly topics *(Submitted during weeks 6 to 12)* 35%

3. Research Proposal on a topic related to IT impacts *(Presented week 13, December 11th; Due December 18th)* 35%

*In accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in English or in French any written work that is to be graded.*

*McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the*
Ontological, Epistemology, and Theoretical Perspectives

In these three classes, we discuss the epistemological and theoretical perspectives used in the study of IT impacts in the field of information systems. The first class defines the field of information systems and some key issues and classes 2 and 3 discuss the different ontological epistemological and theoretical perspectives.

Week 1: Conceptualizing the IT artifact: Where do IT impact Studies fit in IS research (September 11th)


Further readings

**IS Identity**
Gallier, R.D., “Change as Crisis or Growth? Toward a Trans-Disciplinary View of Information Systems as a Field of Study: A Response to Benbasat and Zmud’s Call for Returning to the IT Artifact,” *Journal of AIS*, 4 (6), 2003, 337-351.

**Rigor and Relevance of IS Research**


**Diversity: Threat or Promise**


**Evolution of IS Research**


**Week 2: Epistemological Foundations of IT Impact Research (September 18th)**


Further Readings.

Week 3: Theoretical Perspectives (September 25th)

Further Readings
The Impacts of E-Integration on Firms and Markets

Week 4: The Impacts of E-integration on Markets and Consumers (October 2nd)

This class assesses the impacts of electronic integration and electronic data interchange on firms and inter-firm coordination mechanisms.

Foundations: Theoretical

Empirical

Further readings
Numerous studies have been conducted over the last 30 years on the impacts of IT on organizations. These five classes analyze the empirical evidence on the subject. The impacts of IT on organizational performance are analyzed in classes 5, 6, and 7. Research on the impacts of IT on organizational communications is assessed in class 8.

Week 5. IT Impacts on Organizational Performance: IT, Firm Value, and Consumer Surplus (October 9th)


Information Technology, Organization, and Virtual Organization
Classes 5 to 8


**Week 6. IT Impacts on Organizational Performance: IT and Firm Performance (October 16th)**


**Week 7. IT impacts on Organizational Performance: IT and Intermediate Performance Measures (October 23rd)**

**Innovation**


**Agility and Capabilities**


**Further readings**


Week 8. IT and the Nature of the Firm: IT and Organizational Communications (October 30th)

Media Theories


**Further Readings**


**IT, Groups, and the notion of Virtuality**

Class 9 and 10

Since 10 years, numerous studies have looked at the impacts of IT on group processes and performances. This class assesses how group support systems (GSS) affect idea generation and the quality of decision making in groups. We first analyze the problems associated with group work and then look at how GSS are expected to alleviate them. The empirical evidence on the subject will be assessed last.

Also, recently research effort has been oriented toward understanding the notion of virtuality and its impact on organizations and team. Class 10 will be devoted to this topic.

Week 9: GSS and Group Brainstorming (November 6th)

**Issues in Group Work**


GSS and Idea Generation

Further Readings


Week 10. Studying the Impact of Virtuality (November 20th)


Further Readings


Numerous studies have been conducted on the impacts IT have on individuals and on work. These two classes assess the empirical evidence on the subject. Class 11 is devoted to the impacts of IT on work.

Week 11: IT and Work (November 27th)


Further Readings


Brynjolfsson, E. and L.A. Hitt, "Beyond the Productivity Paradox: Computer are the Catalyst for Bigger Changes," *Communications of the ACM*, 41 (8), 49-55.


Week 12: Is the World Flat? (Reflecting back on broad IT impacts) (December 4th)


Weeks 13 and 14: Synthesis and Presentation (December 11th) (Longer session)