Conducting Multi-Level Research in Information Systems

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Abstract
Information systems research involves an exploration and understanding of the interplay between technologies and human actors who can be grouped in different ways, ranging from simple pairings of employee-manager (dyadic relationship) to complex global virtual teams (group) to societies. Though researchers sometimes identify the impact of technologies and accompanying socio-technical systems over several units of analysis, few researchers investigate their effects across multiple levels of analysis. Yet, IS phenomena, like other research domains, involve variables or constructs found at multiple levels. For example, in virtual team research, investigators often examine individuals’ perceptions and abilities and their impact on group level outcomes such as performance or cohesion. Similarly, in IT implementation research, individual resistance to a new system is often studied as affecting success or failure of the implementation for the organization as a whole.

The workshop is highly interactive, allowing participants to evaluate how their own research can or should be conducted in a multilevel framework. The session begins with a discussion of what multilevel research is, presenting the characteristics of and methodological issues associated with multilevel research. The workshop then offers participants opportunities to explore how multilevel research can be included within their own research area, using guidelines for each of six phases of research development.
Problems can occur if researchers fail to recognize the nature of the phenomena they study when various entities (and their embedded individuals) interact with and affect each other. As a result, it is important for information systems researchers to reflect on their own research and evaluate whether or not they should consider multilevel issues, and to properly equip themselves to deal with potential cross level relationships for their constructs of interest. Consistently, the workshop begins with a discussion of what multilevel research is, presenting the characteristics of and methodological issues associated with multilevel research. The discussion also includes an overview of the current state of multilevel research in the information systems domain. The workshop then offers participants opportunities to explore how multilevel research can be included within their own research area, using guidelines for each of six phases of research development:

1. Research topic formulation
2. Entity specification
3. Variable specification
4. Theory specification
5. Research design specification
6. Analytical technique selection

The workshop is highly interactive, and after each phase of research is described and discussed, participants work on adapting the concepts to their own research, first individually and in teams, and then as a group. The workshop concludes with some general guidelines to help participants develop future research ideas within their area of interest that can be conducted in a multilevel framework.

Speaker Biography

France Bélanger is Professor and Byrd Senior Fellow in the department of Accounting and Information Systems at Virginia Tech. Her research focuses on the use of communication technologies, in particular for technology mediated work and e-business, and on information privacy and security. Her award winning work has been published in Information Systems Research, MIS Quarterly, Communications of the ACM, Journal of Strategic Information...
Dr. Bélanger co-authored the books *E-Business Technologies* (2003), and *Evaluation and Implementation of Distance Learning: Technologies, Tools and Techniques* (2000). She is Associate Editor of *MIS Quarterly*. Her work has been funded by several agencies, corporations and research centers, including the National Science Foundation. She received a Fulbright Distinguished Chair in 2006 (Portugal) and an Erskine Visiting Fellow in 2009 (New Zealand).

This workshop has been developed by Dr. Belanger and has been offered at the Auckland University of Technology and the University of Canterbury in New Zealand, where it was well received.

**Special Requirements**

Note: Regular equipment includes a computer, projector and screen.

- [ ] Computers
- [ ] Internet Access
- [ ] Others, Please specify: Individuals should come to the workshop with paper and pen and/or computers to take notes and develop their research ideas.

**Audience**

Insert a description of likely participants

Maximum number of participants: ________________

Specify the requirements for the audience such as computer, special software, and Internet access etc., in the following:

**Participants**

Participants in the workshop gain more from attending when they have thought about some research topics of interest to them that they would like to pursue more in depth. As we explore the multilevel nature of these phenomena, the participants will come out of the workshop with research ideas and constructs that can help them further this research.

While the workshop format allows for any number of participants (since small group discussions occur), it is most beneficial when the total number of participants in limited to 20 since this allows more time for individual attention from the instructor.