Course Outline 2017
INFOSYS 720: INFORMATION SYSTEMS RESEARCH (15 POINTS)

Semester 2 (1175)

Course Prescription

This course offers a substantive review of research in the discipline of information systems. Behavioural, strategic and social issues relating to the design, implementation and impact of information technology applications will be studied.

Goals of the Course

This course focuses on Information Systems research and the nature of the discipline. We start by looking at the nature of the field as shown by IS journals, conferences, researchers and institutions. This is then followed by a critical examination and evaluation of contemporary IS research on a variety of topics. The idea is to give you a broad understanding of the IS field as a whole.

Research in Information Systems (sometimes referred to as Management Information Systems) can be described as both inter-disciplinary and applied. It is *inter-disciplinary* in that a number of reference disciplines (e.g. Management Science, Computer Science, Organisation Theory, Psychology, Communications and Sociology) contribute some of the concepts, techniques, and research questions addressed by the field. Information Systems is *applied* in the sense that the focus is on the application of the basic concepts to the problem of analysis, design, implementation, and evaluation of computer-based information systems in managerial and organisational settings. The constant introduction of new information technology and the continual discovery of new application areas ensures that IS research is dynamic, relevant and exciting.

The academic goal of most postgraduate students in the medium term is to complete a unique research project (e.g. Honours dissertation or Master's thesis). Therefore, the postgraduate programme in the Department of ISOM is designed to prepare students for doing research. A basic grounding in the concepts underlying research in the discipline is essential if students are to succeed in completing the postgraduate programme.

This course is designed to introduce students to IS research. Students need to understand the nature of IS as a discipline and current research issues and themes. A number of current research areas will be identified and representative papers examined.

Learning Outcomes

By the end of this course it is expected that the student will be able to:

1)   have a good knowledge and understanding of a broad array of theories within the field of information systems;gain competence in critical thinking, and analysis and synthesis of academic sources;Learn how to structure a theoretical argument on an IS research topic.

Content Outline (Subject to Change)

Week 1 Introduction

A discussion of the course objectives, format, expectations and assessment procedures. An introduction to theory.

Week 2 Behaviour Control Theory

Chua, C. E. H., Lim, W. K., Soh, C., & Sia, S. K. 2012. Enacting Clan Control In Complex IT Projects. MIS Quarterly, 36(2): 577-600. (empirical)

Kirsch, L. J. 1996. The Management of Complex Tasks in Organizations: Controlling the Systems Development Process. Organization Science, 7(1): 1-21.

Wiener, M., Mähring, M., Remus, U., & Saunders, C. 2016. Control Configuration and Control Enactment in Information Systems Projects: Review and Expanded Theoretical Framework. MIS Quarterly, 40(3): 741-774.

Some alternate theories to consider:
- Formal and relational governance {Poppo, 2002 #263}
- Agency theory {Eisenhardt, 1989 #13}
- Stewardship theory {Davis, 1997 #216}

Week 3 Sociomateriality

Chua, C. E. H., & Yeow, A. 2010. Artifacts, Actors and Interactions In The Cross-Project Coordination Practices of Open-Source Communities. Journal of the Association for Information Systems 11(12): 838-867. (empirical)

Orlikowski, W. J. 2007. Sociomaterial Practices: Exploring Technology at Work. Organization Studies, 28(9): 1435-1448.

Leonardi, P. M., & Barley, S. R. 2008. Materiality and Change: Challenges to Building Better Theory About Technology and Organizing. Information & Organization, 18(3): 159-176.

Some alternate theories to consider:
- Actor Network Theory {Latour, 1986 #1006;Latour, 1987 #1001}
- Structuration Theory {Giddens, 1984 #1297}

Week 4 Bunge-Wand-Weber

Burton-Jones, A., & Meso, P. N. 2006. Conceptualizing Systems for Understanding: An Empirical Test of Decomposition Principles in Object-Oriented Analysis. Information Systems Research, 17(1): 38-60. (empirical)

Wand, Y., & Weber, R. 1995. On the Deep Structure of Information Systems. Information Systems Journal, 5(3): 203-223.

Wand, Y., & Weber, R. 2002. Research Commentary: Information Systems and Conceptual Modeling-A Research Agenda. Information Systems Research, 13(4): 363-376.

Some alternate theories to consider:

- Semiotics {Stamper, 2000 #889}

Week 5 Adaptive Structuration Theory

Chin, W., Gopal, A. Salisbury, W. D. Advancing the Theory of Adaptive Structuration: The Development of a Scale to Measure Faithfulness of Appropriation. Information Systems Research. Pp. 342-367.
Desanctis, G. & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. Organization Science. 5, p. 121-147.
Ann Majchrzak, Ronald E. Rice, Arvind Malhotra, Nelson King and Sulin Ba. Technology Adaptation: The Case of a Computer-Supported Inter-Organizational Virtual Team. MIS Quarterly, Vol. 24, No. 4 (Dec., 2000), pp. 569-600

Week 6 User Innovation Theory

Kankanhalli, A., Ye, H., Teo, H. H. (2015). "Comparing Potential and Actual Innovators: An Empirical Study of Mobile Data Services Innovation", MIS Quarterly, 39(3) 667-682. (empirical)
Von Hippel, E. 1994. Sticky information and the locus of problem solving: Implications for innovation, Management Science 40(4), 429-439.
Von Hippel, E., and Katz, R. 2002. Shifting innovation to user via toolkits. Management Science 48(7), 821-833.

Alternate theories:
- individual innovativeness theory
- cognitive evaluation theory

Week 7

Mid-semester Break

Week 8

Mid-semester Break

Week 9 Student Presentations

Each student will get 20 minutes to present their theory comparison outline and receive feedback

Week 10 Student presentations

Each student will get 20 minutes to present their theory comparison outline and receive feedback

Week 11 Transaction Cost Theory

Alaghehband, F. K., Rivard, S., Wu, S., & Goyette, S. 2011. An Assessment of the Use of Transaction Cost Theory in Information Technology Outsourcing. Journal of Strategic Information Systems, 20(2): 125-138.
Geyskens, I., Steenkamp, J.-B. E. M., & Kumar, N. 2006. Make, Buy, or Ally: A Transaction Cost Theory Meta-Analysis. Academy of Management Journal, 49(3): 519-543.
Tiwana, A., & Bush, A. 2007. A Comparison of Transaction Cost, Agency, and Knowledge-Based Predictors of IT Outsourcing Decisions: A U.S.- Japan Cross-Cultural Field Study. Journal of Management Information Systems, 24(1): 259-300.

Week 12 Prospect Theory

Keil, M. Mixon, R., Saarinen, T., & Tuunainen, V. Understanding Runaway Information Technology Projects: Results from an International Research Program Based on Escalation Theory. Journal of Management Information Systems, 11(3), 65-85.
Fox, C. R., & Poldrack, R. A. (2014). Appendix – Prospect Theory and the Brain. In P. W. Glimcher & E. Fehr (Eds.), Neuroeconomics: Decision Making and the Brain (2nd ed.). Oxford, UK: Academic Press.
Levy, J. S. (1992). An Introduction to Prospect Theory. Political Psychology, 13(2), 171-186.

(Supplemental)

Caplin, A., & Glimcher, P. W. (2014). Chapter 1 – Basic Methods from Neoclassical Economics. In P. W. Glimcher & E. Fehr (Eds.), Neuroeconomics: Decision Making and the Brain (2nd ed., pp. 3-17). Oxford, UK: Academic Press.

Week 13 Top Management Support

Liu, G. H. W., Wang, E., & Chua, C. E. H. 2015. Leveraging Social Capital to Obtain Top Management Support in Complex, Cross-Functional IT Projects. Journal of the Association for Information Systems, 16(8): 707-737.
Jarvenpaa, S. L., & Ives, B. 1991. Executive Involvement and Participation in the Management of Information Technology. MIS Quarterly, 15(2): 205-227.
Sharma, R., & Yetton, P. 2011. Top Management Support and IS Implementation: Further Support for the Moderating Role of Task Interdependence. European Journal of Information Systems, 20(6): 703-712.

Alternate theories:
- Stakeholder theory

Week 14 Unified Theory of Technology Acceptance

Bagozzi, R.P. (2007), "The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift", Journal of the Association for Information Systems, 8 (4), pp. 244–254.
Davis, F. D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", MIS Quarterly, 13 (3): 319–340.
Venkatesh, V.; Morris; Davis; Davis (2003), "User Acceptance of Information Technology: Toward a Unified View", MIS Quarterly, 27 (3), pp. 425–478.

Learning and Teaching

Lecturer
Dr Cecil Chua
Associate Professor of Information Systems
Department of ISOM
OGGB Room 474
aeh.chua@auckland.ac.nz

Lectures
Day and time???

Learning Resources

There is no textbook as such for this course, because all the readings are recent and relevant articles from journals and conference proceedings. However, students are expected to read more widely including additional articles from any recognised journal. Many useful citations can also be obtained from the AIS Digital Library, the ACM Digital Library, IEEE Xplore Digital Library and other bibliographic databases such as ABI/Inform, Science Direct or the Emerald Library. Many of these libraries and databases are available online from the University of Auckland Library. You should be familiar with accessing these digital resources.

Assessment

Quizzes   27%
Mid-semester presentation   25%
Comparative essay   48%
Total   100%

Note that there is no final exam.

Learning Outcome	Quizzes	Class Presentation	Comparative Essay
1	X	X	X
2		X	X
3		X	X

Assessment detail

Quizzes

The quizzes check if students have read the materials before coming to class. There will be 10 quizzes worth 3 marks each.

Class Presentation/ Comparative Essay

The core student deliverable in this class will be an analysis of how two competing theories work within the context of an Information Systems problem.

Students will have to select two theories. The theories might either be those taught in class, or other theories. The most likely outcome is the student will choose one theory taught in class, and one other theory. The student must then apply the theory to an information systems problem/phenomenon of the student's choice.

The student's work should:
(1) Compare and contrast the kind of insights the theories bring to the problem/phenomenon. More importantly, the work should discuss the kinds of gaps the theories cannot solve.
(2) Compare and contrast the predictions the theories make with regard to the problem/phenomenon. Are the predictions right or wrong?
(3) The culture of the theories and how that culture biases what the theories find. For example, are most works in a particular theory positivist/quantitative?
(4) The things the theory would suggest about the problem/phenomenon but that empirical work has yet not been done to test the theory.

Halfway through the semester, students will be asked to present their current line of thinking orally in front of the class. The oral presentation is a format that allows the student to present raw thinking.

Presentation marks:

Articulation of theories' explanation of problem/phenomenon: 5
Articulation of theories' predictions of problem/phenomenon: 5
Articulation of theories' cultural biases: 5
Articulation of things left to do: 5
Fielding questions: 3
Commenting on others' work: 2

At the end of the semester, students will present an essay on their thinking. An essay is a more finished product.

Essay marks:

Organization: 5
Articulation of theories' explanation of problem/phenomenon: 10
Articulation of theories' predictions of problem/phenomenon: 10
Articulation of theories' cultural biases: 10
Articulation of things left to do: 10

The paper should not exceed 15 double-spaced A4 pages excluding references.

Programme and Course Advice

Prerequisite: It is advisable for students to have completed at least one of the research methods courses (INFOSYS 750 or 751) before enrolling in INFOSYS 720. Students can enrol in INFOSYS 750 or 751 concurrently with this course. INFOSYS 720 is a substantive overview of research in information systems, not a methods course. It is compulsory for all students enrolled in or intending to enrol in the Masters of PhD programme.

Since this course is taught at postgraduate-level, it is organised as a seminar, and not as a series of lectures. This approach assumes that the lecturers and students can work together in a collaborative fashion. The role of the lecturers in this environment is to establish a framework and put together a set of materials for discussion, and to create the conditions suitable for learning. The underlying assumption is that we are all co-producers in learning.

Running the course as a seminar means that all students are expected to participate and contribute equally to the discussion. It is assumed that students will have read and thought about the assigned materials before class and come prepared to contribute to the class discussion. The classes are intended to be a forum for critically reviewing and discussing the set readings; students are expected to participate fully in this process.

The course will use a seminar format. Each paper will be assigned to a student who will lead the discussion. The student will be responsible for handing in a two-page summary and discussion questions at the start of class and will have overall responsibility for facilitating the discussion of this article.

Plagiarism Statement

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the world-wide web. A student's assessed work may be reviewed against electronic source material using computerised detection mechanisms. Upon reasonable request, students may be required to provide an electronic version of their work for computerised review.

Inclusive Learning

Students are urged to discuss privately any impairment-related requirements face- to-face and/or in written form with the course convenor/lecturer and/or tutor.

Course Evaluation

While I will assign a grade in this course (as required by the university), the final evaluation is yours. The real value of any course is what you learn which is best judged by you. I welcome and encourage any comments about the course, course materials and/or assignments at any time in order to make this learning experience as enjoyable and valuable as possible.