Research on Innovation Processes
A NORSI Common PhD Course
September 10-13, 2012 in Trondheim, Norway

Instructor: Andrew H. Van de Ven, Univ. of Minnesota, USA
Email: avandeve@umn.edu Web Site: http://umn.edu/~avandeve

Course Syllabus

This course focuses on how entrepreneurs create new businesses and how organizations innovate and change. Special emphasis is given to understanding the sequences of events that typically unfold in individuals, groups, organizations, and industries as innovations develop from concept to implementation. We rely heavily on concepts and findings from the Minnesota Innovation Research Program, as well as other studies. We focus on how the innovation journey unfolds in the creation of a wide variety of new businesses, technologies, products, programs, and services, and what paths along this journey are likely to lead to success and failure. We apply the Engaged Scholarship model for building skills in conducting research on processes of organizational innovation and change. These skills focus on problem formulation, theory building, research design, and problem solving. Students apply these steps of engaged scholarship by working in teams to develop research proposals to study an assigned innovation case and one of their choosing.

Expectations

The course is designed to encourage learning among students as much as with the instructor. Having fun, good humor, open communications, and supportive colleagues enhance learning, while competitive and negative behaviors destroy it. Course assignments and grading procedures are intended to promote cooperative (not competitive) behavior. We want everyone to seek and give feedback for the purpose of learning, not for "proving" your competence. Feedback seeking and giving must be constructive. We want "put-ups," not "put-downs." A critical, but constructive open attitude is essential for learning. Negative and destructive comments hinder this learning environment.

Required Texts and Readings

- Andrew H. Van de Ven, Douglas E. Polley, Raghu Garud, and Sankaran Venkataraman, *The Innovation Journey*, New York: Oxford Univ. Press, 1999, revised 2008.
- Andrew H. Van de Ven, *Engaged Scholarship: A guide for organizational and social research*, Oxford Univ. Press, 2007.
- Other readings and notes will be distributed to class participants.

Dates	Class Sessions
1. Sept. 10 am	Introduction, Mapping Innovation Journey
2. Sept. 10 pm	Process theories of innovation and change
3. Sept. 11 am	Research on innovation processes
4. Sept. 11 pm	Formulating innovation research problems – executive session
5. Sept. 12 am	Building innovation process theories
6. Sept. 12 pm	Designing innovation process research
7. Sept. 13 am	Communicating and using innovation research findings
8. Sept. 13 pm	Opening Ceremony

SESSION	OUTLINE OF CLASS TOPICS, READINGS, AND ASSIGNMENTS
Class 1 **Sept. 10 a.m.** Topics: Assignment:	**1. Course Introduction and Mapping the Innovation Journey** Student introductions and team formations What is innovation? What is change? How does it unfold over time? Twelve common elements of the innovation journey Select your own innovation case and fill out this case form Compare your case with either CIP or Qnetics cases in chapters 8 &10 Team discussion questions about innovation journey in cases 1. Which of the common hurdles in the innovation journey are/were present in your case? 2. How would/should you maneuver these hurdles? What models could you use? Review Prof. Van de Ven's class 1 slides (forthcoming) Read: *Innovation Journey*, (2008) Forward, Preface, Chp. 1, 2, and 8 or 10 Fagerberg, Fosaas & Sapprasert, "Innovation: Exploring Knowledge Base," *RP* 2012 Hoholm & Olsen, "The contrary forces of innovation," *Ind. Marketing Mgmt*, 2012. Fill out this case form for an innovation case you know well or have experienced.
Class 2 **Sept. 10 pm** Topics: Assignment:	**2. Process Models of Innovation and Change** The need for alternative ways of thinking about innovation and change. Four ways to explain change: life cycle, teleology, dialectics, & evolution. Methods for analyzing cases or problems Discussion questions: Explain WHY your case unfolded as it did. 1. What triggered the process? 2. What guided the development period? 3. Why did it end the way it did? Review Prof. Van de Ven's class 2 slides (forthcoming) Read: 1. Van de Ven & Poole "Explaining Development & Change in Organizations," AMR 1995 2. Peruse examples of process models by • Kotter of planned change in HBR 1995 • Miner of evolutionary change in Baum & Singh 1994 • Usher of partial cumulative synthesis, 1950 • Greiner of organization growth stages in HBR, 1972 • Van de Ven's (1992) comment on researching Greiner's model.

Class 3 **Sept. 11 am** Topics: Assignment:	**3. Conducting Research on Innovation Processes** An engaged scholarship model for conducting research Key questions in planning a research study (complete worksheet) 1. What is your research problem and question? 2. What is your proposed answer the research question? 3. How will you empirically study your proposed answer? 4. How will you communicate and use the study findings? 5. For and with whom will you conduct this study? Team discussions on completed worksheets Review Prof. Van de Ven's class 3 slides (forthcoming) Complete this worksheet for designing a research study Read: "Engaged Scholarship", 2007, chapters 1 and 9 Also, peruse extensions in: Van de Ven, "Reflections on research for theory and practice," in *Useful Research*, 2011
Class 4. **Sept. 11 pm** Topics: Assignment:	**4. Central Problems in Managing Innovation – Executive Session** Central Problems: 1. Human problem of managing attention 2. Process problem of managing ideas into good currency 3. Structural problem of managing complexity and part-whole relations 4. Strategic problem of institutional leadership 5. Managerial problem of maneuvering what you can't control. 'Fishboal' discussion with executives and concluding comments/questions by students Review Prof. Van de Ven's class 4 slides (forthcoming) All Read: Van de Ven, "Central Problems in Mgt. Innovation," *Mgmt. Sci.* 1996 Van de Ven & Sun, "Breakdowns in Implementing Models of Change," *AMP*, 2011 Students also read "Engaged Scholarship" (2007), chapter 3
Class 5. **Sept 12 am** Topics: Assignment:	**5. Formulating Innovation Research Question and Theory** Steps in research problem formulation 1. Situating the problem/topic 2. Grounding the problem/topic 3. Diagnosing the problem/topic 4. Stating the research question Innovation research question topic areas: 1. Learning the innovation journey (chapter 3) 2. Leading the innovation journey (chapter 4) 3. Managing relationships during the innovation journey (chapter 5) 4. Building an infrastructure for the innovation journey (chapter 6) Steps in Theory Building 1. Idea creation by abduction 2. Theory development by deduction

	3. Theory justification by argumentation and induction Exercise: Teams propose a theory to address their research question Team discussions and presentations Review Prof. Van de Ven's class 5 slides (forthcoming) Read: Engaged Scholarship, 2007, chapters 4 Innovation Journey chapters in relevant topic area.

Class 6. **Sept 12 pm** Topics: Assignment:	**6. Designing Innovation Research: Variance and Process Model**s Two modes of knowing: variance and process models Designing variance studies Designing process studies Exercise: Teams complete variance or process research worksheets to examine their theory Team discussions and presentations Review Prof. Van de Ven's class 6 slides (forthcoming) Read: Engaged Scholarship, 2007, chapters 6 and 7 Also peruse examples of innovation research designs in: Garud, Jain & Kumaraswamy, AMJ, 2002. Hoholm & Araujo, "Studying innovation in real-time," *Ind. Marketing Mgmt*, 2011
Class 7. **Sept. 13 am** Topics: Assignment:	**7. Writing, Communicating and Using Research Findings** Writing as a conversation Barriers to cross in communicating with audience Practicing engaged scholarship Student team presentations Read: Engaged Scholarship, 2007, chapters 8 and 9 Huff, "Learning to be a good writer," 2002 Pratt, "Tips on writing up Qualitative research" AMJ 2009 AOM, "How to make your sessions exciting
Sept 13, pm	**Opening Ceremony of NORSI/PIMS PhD Program** Program and Logistics to be announced.

Worksheet on your selected innovation case

Your name:
Your innovation case:
Breifly describe your innovation:

How did the following occur in your selected innovation case?

Initiation Period	
1. Gestating chance events	
2. Shocks trigger innovation efforts	
3. Innovation team formed & funded based on plan	
Developmental Period	
4. Activities proliferate	
5. Setbacks and mistakes occur	
6. Innovation goals and criteria change	
7. Innovation personnel part time and turnover	
8. Leadership involved and shift roles	
9. Lock-in to developmental paths & relationships	
10. Building innovation infrastructure	
Implementation/Termination Period	
11. Linking “new” with “old” and reinvention	
12. Innovations stop when implemented or when money runs out	

Worksheet for Designing a Research Study

Please answer the five questions below about a research study of your innovation case.. We will discuss your answers to these questions in class

1. What is your research problem and question?
   - Address journalist's questions of who? what? where? when? why? & how? the problem exists up close & from afar

2. What is your proposed answer to the research question?
   - Is your answer any better than the status quo or a competing plausible alternative answer?

3. How will you empirically study your proposed answer?
   - Outline a research design for gathering data to examine your proposal.

4. How will you communicate and use study findings to address your research question & problem?

5. Background questions:
   - For whom and with whom are you conducting the study?
   - Who's point of view will you take in conducting the study?
   - Who will you engage to answer these questions? (Don't go it alone!)

Worksheet for Designing a Variance Research Study

(See Van de Ven, *Engaged Scholarship* Chapter 6, for guidance in completing this worksheet)

Issues	Decisions
1. State your variance research question Whose viewpoint is featured?	
2. What is the unit of Analysis? What is the unit of observation?	
3. State your key Proposition that answers your research question.	
4. What is your experi-mental design. How will you control for extraneous factors?	
5. How sample units, constructs, measures & settings? What is your sample size?	
6. How manipulate or measure variables? What is the frame of reference of measures?	
7. How code and analyze the data? How will you obtain stakeholder feedback to prelim. findings?	
8. What are the threats to study validity? - Internal validity - Statistical validity - External validity - Construct validity	

Worksheet for Designing a Process Research Study

(See Van de Ven, *Engaged Scholarship* Chapter 7, for guidance in completing this worksheet)

Issues	Your Process Research Study
Process Study Design	
1. State your process research question Whose viewpoint is featured?	
2. How define process - as variable or event? What is your unit of Analysis?	
3. State your key process proposition. What process theories do you examine?	
4 What is your process research design? - concepts/units examined over time - real-time or historical event data	
5. How measure process concepts? - What is an incident or event? - How measure & verify incidents? - How tabulate and organize process data?	
6. How sample cases, events, & observations? - sample diversity in what dimensions? Sample size - # of events vs. cases	
7. How analyze data to develop or test your process proposition?	
8. What are the threats to study validity? - replicable methods? - reliable measurements? - story verisimilitude?	