

ICEB+eBRF  
Tampere, Finland  
November, 28th-December, 2nd 2006

# UNDERSTANDING E-COMPETENCES IN ADOPTION AND ASSIMILATION OF E- SERVICES

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# Overview of Presentation

- Study Background and Research Question
- The Concept of Competence
- The Research Method
- Study Results
- Concluding Remarks and Implications for Future Research



# Study Background

- The advent of the World Wide Web has made possible a new type of service: E-Services
- E-Services: services that are provided and consumed through the use of ICT-based systems
- Main Characteristics of E-Services: The provision and consumption become separated in time and space



# Study Background (Cont'd)

- E-services: business-to-consumer and business-to-business.
- Research Question: ***What are the competences required both at managerial and individual level for a successful adoption and assimilation of business-to-business e-services?***

# The Concept of Competence

- Many different definitions and levels of competences: task-specific, firm-specific, industry specific competences
- Yukl (1989) taxonomy
  - Technical Competence: knowledge about methods, techniques and processes to conduct a specific activity
  - Interpersonal skills: knowledge about social skills, ability to communicate and cooperate
  - Conceptual Skills: creativity, efficiency in problem solving, analytical capability, capacity to understand opportunities and problems.



# The Concept of IT Competence

<b>Author</b>	<b>Definition of Competence</b>	<b>Individual/Organizational Level</b>
Basselier et al. (2001)	IT related explicit and Tacit Knowledge	Individual level (Business Manager)
Lee and Trauth (1995)	Critical Knowledge and Skills	Individual level (IS professionals)
Bharadwaj, Sambamurthy and Zmud (2000)	Critical IT Capabilities	Organizational Level
Van der Heijden (2000)	IT core capabilities; organization specific routines, skills, resources and processes	Organizational level and IT management
Sambamurthy and Zmud (1994)	Capabilities, skills and tacit know-how	Organizational level and IT management
Feeny and Willcocks	IS core capabilities; organization specific routines, skills, resources and processes	Organizational level and IT management



# Adoption

- Adoption is “the decision to make full use of an innovation as the best course of action available” (Rogers, 1995).
- Two levels of adoption:
  - Primary adoption at management level
  - Implementation and use of the innovation at individual level (Zaltman et al., 1973)



# Assimilation

- Assimilation is the extent to which the use of a technology diffuses across organizational work processes and becomes routinized in the activities associated with those processes (Tornatzky and Klein, 1982).
- Many Information Technologies rates of organizational assimilation lag behind their rates of organizational adoption (Fichman and Kemerer, 1999).



# Research Method

- Case study of a web-based travel reservation system
- Semistructured interviews with the service provider and service consumers (or customer companies)
- Critical Incident Technique (CIT)



# Research Method (Cont'd)

- A critical incident is “any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects” (Flanagan, 1954 p. 327).



# Companies Background

<b>Company/ Information</b>	<b>Type of Business</b>	<b>Number of Employees In Denmark</b>	<b>Number of persons interviewed and relative position</b>
<b>TQ3</b>	<b>Provider of Web-based Travel Solutions</b>	<b>12,000 Worldwide</b>	<b>(8) Director of the Danish Office, Account Manager, Online System Administrator</b>
<b>B</b>	<b>Paint and Varnish Business</b>	<b>No Data</b>	<b>(1) Secretary and responsible of travel reservations and expenses</b>
<b>C</b>	<b>Research and Development of Human and Animal Medical Products</b>	<b>140 in Denmark</b>	<b>(1) Full Time Travel Manager (Responsible for all travel reservations and expenses)</b>
<b>D</b>	<b>Producer of Cleaning Equipment</b>	<b>No Data</b>	<b>(1) Secretary and responsible of travel reservations and expenses</b>
<b>E</b>	<b>Engineering consulting</b>	<b>100</b>	<b>(1) Secretary and responsible of travel reservations and expenses</b>
<b>F</b>	<b>Production and service of plastic card products</b>	<b>150 in DK</b>	<b>(1) Secretary and responsible of travel reservations and expenses</b>



# Summary of Results

<b>Competence Category</b>	<b>Competence</b>	<b>Individual or Managerial</b>
	<b>Vision</b>	<b>Top Management</b>
	<b>Control</b>	<b>Top Management</b>
<b>Technical Skills</b>	<b>Knowledge competency Transfer Competency</b>	<b>Individual</b>
<b>Interpersonal skills</b>	<b>Social Competency Empathy Communication Competency</b>	<b>Individual</b>
<b>Conceptual skills</b>	<b>Logic Competency Judgement Competency Creativity Competency Straddle Competency</b>	<b>Individual</b>



# Definition of Competences (Managerial Level)

- ***Vision:*** the capability of management to understand the opportunities and the value that technology contributes to the company and thus make a proactive effort to adopt it.
- ***Control competency:*** the capability to encourage and enforce assimilation at individual level.

# Definition of Competences (Technical Skills)

- ***Knowledge competency***
  - Explicit knowledge: formal knowledge that can be acquired through formal training, can be read or explained.
  - Tacit knowledge: gained through experience and experiential training.
- ***Transfer competency***: the capability to transfer the skills learned and knowledge acquired in a given context to a new context.



# Definition of Competences (Interpersonal Skills)

- ***Social competency***: the capability to use other people competences when insecure or facing problems in solving a specific task.
- ***Empathy***: the capability to understand and take into consideration other colleagues needs and wants with regard to travel and economic restrictions.
- ***Communication competency***: the capability to communicate with others.



# Definition of Competences (Conceptual Skills)

- ***Logic competency***: the capability to understand and follow the instructions from others.
- ***Judgement competency***: the capability to judge different kinds of situations and make a decision as for example when to stop trying to solve a problem by yourself and when to ask others instead.



# Definition of Competences (Conceptual Skills, Cont'd)

- ***Flexibility competency***: the capability to solve and find solutions to unforeseen problems, being able to spring out of routine work, getting used to new ways of doing a job or task.
- ***Straddle competency***: the capability to handle multiple sources at the same time.



# Conclusions and Limitations

- Top management level and individual level competences are important in e-services adoption
- Limitations:
  - Limited number of companies
  - One specific type of e-service
  - All the companies were successful adopters, therefore we do not know about adoption failures

**THANK YOU!!!!!!**

