

Action Research, Design Science, and Participatory Design:
Three Approaches in Collaborative IS Projects & IS Publications
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Me (beyond my bio abstract)

- Degrees in Business (PhD and MBA) with IS as a major
- My first IS course in Bloomington, Indiana, US:
Taught by a Tunesien ... ,
Professor Tawfik Jelassi, ENPC, Paris
- My first job in IS: Working for a Tunesien – at INSEAD in France
- My last PhD consortium – teaming up with a Tunesien

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Moez Limayem



(PhD Consortium, Montreal ICIS 2007)

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Professor Tawfik Jelassi, ENPC, Paris
- My first job in IS: Working for a Tunesien – at INSEAD in France
- Since then: Focus on Strategic IS Issues
organizational issues & IS, knowledge mgmt (under coepetition),
and recently the 'IS community' ... , [see most of today's talk](#)
- Gratefully & persistently 'joined' the AIS community
www.aisnet.org,
read papers / books by their 'big shots',
going to conferences – make friends and get inspired and motivated

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European Conference on IS (ECIS)
- 2009 in Verona, Italy -

www.ecis2009.it
 June 8 – 10, 2009

Paper deadline:
 November 15,
 November 30 ©

Master of the Ceremony
Antonio Cordella !



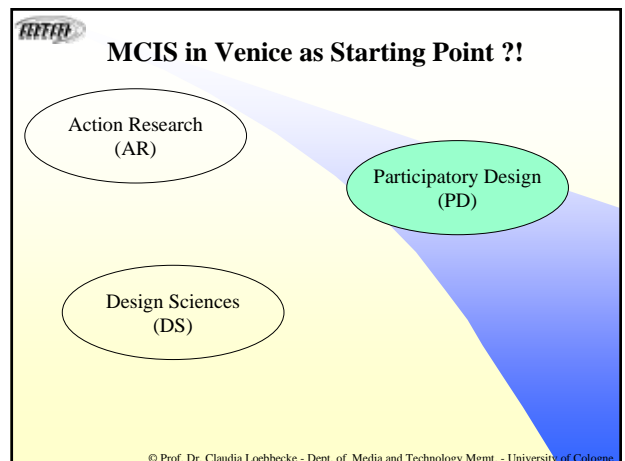
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International Conference on IS (ICIS)
- 2008 in Paris, France -

www.icis2008.org

Come and let's have fun together again
 December 10 – 13, 2008

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Introductory Thoughts

Similar topics in seemingly different journals and conferences

Personal Frustration I: Not enough time / money to read and attend

Colleagues / friends claiming to do things that hardly anyone else does

Personal Frustration II: Not aware of literature which is basic to other groups

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Research Interest

- Field of Information Systems (IS): ... many projects done 'in the real world' --- applied IS (?)
- Investigating IS projects (accessible only *internationally published* ones)
- Focusing on projects referring to three 'methods': Action Research, Design Science, and Participatory Design
- Text analysis of publications for IS projects investigating whether the projects have been clearly tied to one approach

Do projects published being based on one approach' also meet characteristics of other two approaches ?

And, if yes (or no), what could that mean?

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Characteristics of Collaborative IS Research Approaches

Collaborative = Somehow connected to / with / for 'the real world'

Interesting ... Relevant ... Useful ...

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Characteristics of Collaborative IS Research Approaches

	Action Research (AR)	Design Science (DS)	Particip. Design (PD)
Objective	Change of (social) system, organizational dev.	IT artifact creation, improv. human/IT interact	Technology design, user empowerment
Focus	Practice / Theoretical development	Theoretical work	Practice / Theoretical consideration
Selected Core References	Susman, Evered (78), Baskerville, Wood-Harper (98), Avison et al. (99)	Walls et al. (92), March, Smith (95), Hevner et al. (04)	Greenbaum, Kyng (91), Clement, Besselaar (93), Kensing et al. (98a)
Theoretical Grounds	Social Sciences	Engineering, Computer Science	Social Science, Computer Science
Learning Approach	Learning by acting	Double loop learning	Learning by doing
Res. Intervention	On-site in social setting	On-site in organization	On-site at work place
Org. Members' Involvement	Practitioner contribution to entire research	User contribution to artifact design	Worker contribution to full development cycle
Determining Change/Design Req.	Dialogue	Observation	Ethnography
Research Process	Phased, continuous, iterative	Phased, continuous, iterative	Phased, continuous, iterative

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Publications for Text Analysis

Lindgren et al. (04)	MISQ	Design principles for Competence Management Systems: A Synthesis of an Action Research
Salmela et al. (00)	EJIS	Information Systems Planning in a Turbulent Environment
Vidgen (97)	ISJ	Stakeholders, Soft Systems and Technology: Separation and Mediation in the Analysis of Information Systems Requirements
Braa, Hedberg (02)	Inf. Soc.	The Struggle for District-Based Health Information Systems in South Africa
Fruhling, Vreede (06)	JMIS	Field Experiences with eXtreme Programming: Developing an Emergency Response System
Markus et al. (02)	MISQ	A Design Theory that Support Emergent Knowledge Processes
Peffers et al. (06)	DESRIST*	The Design Science Research Process: A Model for Producing and Presenting Information Systems Research
Miller et al. (06)	DESRIST	Using a Digital Library of Images for Communications: Comparison of a Card-Based System to PDA Software
Haynes (06)	DESRIST	Design Knowledge as a Learning Resource
Jones, Gregor (06)	DESRIST	The Formulation of an IS Design Theory for e-Learning
Kensing et al. (98)	CSCW	Participatory Design at a Radio Station
Anderson, Crocca (93)	CACM	Engineering Practice and Co-Development of Product Prototypes
Bodker (96)	HCI	Creating Conditions for Participation: Conflicts and Resources in Systems Development
Clement (94)	CACM	Computing at Work: Empowering Action by 'Low-Level Users'
Gronbak et al. (93)	CACM	CSCW Challenges: Cooperative Design in Engineering Projects

* 1st Conference on DS

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Example Text Analysis: DS Project - Markus et al. (2002)

	Action Research (AR)	Design Science (DS)	Particip. Design (PD)
Objective	"The main research design of this study is participatory design. The design process is based on the design science research process (DSR) [14]."	"This paper addresses a design problem of a user interface for a mobile device. The design process is based on the design science research process (DSR) [14]."	"The main research design of this study is participatory design. The design process is based on the design science research process (DSR) [14]."
Focus	"The focus of this study is on the design of a user interface for a mobile device. The design process is based on the design science research process (DSR) [14]."	"The focus of this study is on the design of a user interface for a mobile device. The design process is based on the design science research process (DSR) [14]."	"The focus of this study is on the design of a user interface for a mobile device. The design process is based on the design science research process (DSR) [14]."
Selected Core References	"Markus, M. (2002). A Design Theory that Support Emergent Knowledge Processes. MISQ, 26(2), 1-24."	"Peffers, B., Tuomi, J., & Tuomi, J. (2006). The Design Science Research Process: A Model for Producing and Presenting Information Systems Research. In Proceedings of the 37th Hawaii International Conference on System Sciences (HICSS-37), 1-10."	"Markus, M., & Galletta, D. (2001). Participatory Design: A Research Agenda for the 21st Century. In Proceedings of the 34th Hawaii International Conference on System Sciences (HICSS-34), 1-10."
Theoretical Grounds	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."
Learning Approach	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."
Res. Intervention	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."
Org. Members' Involvement	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."
Determining Change/Design Req.	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."
Research Process	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."	"The design science research process is based on the design science research process (DSR) [14]."

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Example Text Analysis: DS Project - Markus et al. (2002)

Particip. Design (PD)

Objective
Focus
Selected Core References
Theoretical Grounds
Learning Approach
Res. Intervention
Org. Members' Involvement
Determining Change/Design Req.
Research Process

"(...) team repeatedly intervened into the organizational design activities of the involved companies, deploying prototypes that tested various assumptions about how organizational work is done, observing how users responded and iterating" p. 188

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	AR Projects Characteristics			DS Projects Characteristics			PD Projects Characteristics		
	AR	DS	PD	AR	DS	PD	AR	DS	PD
Objective	✓	✓	✓	✓	✓	✓	✓	✓	✓
Focus	✓	✓	✓	✓	✓	✓	✓	✓	✓
Selected Core References	✓	---	✓	---	✓	---	---	---	✓
Theoretical Grounds	✓	✓	✓	---	✓	✓	✓	✓	✓
Learning Approach	✓	✓	✓	✓	✓	✓	✓	✓	✓
Res. Intervention	✓	✓	✓	✓	✓	✓	✓	✓	✓
Org. Members' Involvement	✓	✓	✓	✓	✓	✓	✓	✓	✓
Determining Change/Design Req.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Research Process	✓	✓	✓	✓	✓	✓	✓	✓	✓

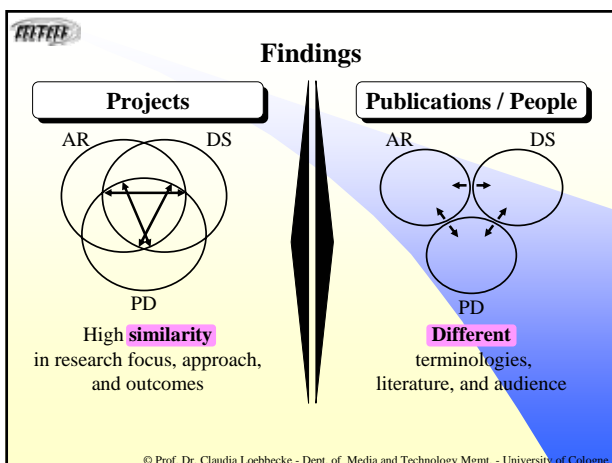
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	AR Projects Characteristics			DS Projects Characteristics			PD Projects Characteristics		
	AR	DS	PD	AR	DS	PD	AR	DS	PD
Objective	✓	Δ	Organizational Improvement vs. Artifact Design	✓	✓	✓	✓	✓	✓
Focus	✓	✓	✓	✓	✓	✓	✓	✓	✓
Selected Core References	✓	Δ	Slightly Different Core References	✓	✓	✓	✓	✓	✓
Theoretical Grounds	✓	Δ	Computer Sciences vs. Social Sciences	✓	✓	✓	✓	✓	✓
Learning Approach	✓	✓	✓	✓	✓	✓	✓	✓	✓
Res. Intervention	✓	✓	✓	✓	✓	✓	✓	✓	✓
Org. Members' Involvement	✓	Δ	Managers vs. Workers Involvement in PD	✓	✓	✓	✓	✓	✓
Determining Change/Design Req.	✓	✓	Δ Ethnography only in PD	✓	✓	✓	✓	✓	✓
Research Process	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	AR Projects Characteristics			DS Projects Characteristics			PD Projects Characteristics		
	AR	DS	PD	AR	DS	PD	AR	DS	PD
Objective	✓	✓	✓	✓	✓	✓	✓	✓	✓
Focus	✓	✓	✓	✓	✓	✓	✓	✓	✓
Selected Core References	✓	---	✓	---	✓	---	---	---	✓
Theoretical Grounds	✓	✓	✓	---	✓	✓	✓	✓	✓
Learning Approach	✓	✓	✓	✓	✓	✓	✓	✓	✓
Res. Intervention	✓	✓	✓	✓	✓	✓	✓	✓	✓
Org. Members' Involvement	✓	✓	✓	✓	✓	✓	✓	✓	✓
Determining Change/Design Req.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Research Process	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Discussion

Similar (Research) Projects

Different Publications / Communities / Ways of Appreciation

Is this the Diversity, 'we' think to have, claim to have, want to have ?

Who is 'we' ? The 'main streamers' ... ? - Oxymoron

Mainly diversity in labels, limited diversity in work !

Academic Breadth or 'Re-inventing the Wheel'?

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Discussion

-

No sufficient evidence of specialization

Protagonists in specific arenas, refraining from participating in other communities

Little kingdoms

Redundancy – economically and in terms of 'doing good to the world' questionable

+

Driver for knowledge creation

More scientific publication outlets with pubs being/becoming scientist's 'currency'

Chance for shaping personal profiles, supporting careers, protagonist positions for newcomers

Growing specialization

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Softening the Argument (a Bit)

We all enjoy diversity
in people, groups, research incentives, topics, and approaches

and
we think the diversity SHOULD continue

BUT
that is easily said if
one is a 'main stream' / 'main community' player

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Take Away

- Diversity ☺ - mainly in labels, limited in projects and work !
[Sources: 'Research' and personal (fun!) experience
- Bad news: Ignorance and redundancy
 ➔ Blame on senior researchers, editors etc
- Good news: Many, many opportunities to find a niche
 ➔ Opportunity for junior (and senior) researchers
- Recommendation / ToDo:
 - Be aware !
 - Do not insist on your background / community
 - Appreciate authors / references beyond 'your group'
 - Mix and mingle, read and MEET – á propos

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À Propos --- ... MEET

MCIS 2008
in Hammamet

MCIS 2009++
in the
Mediterranean Union

Via the AIS
www.aisnet.org

ICIS in Dec. 2008
in Paris
www.icis2008.org

ECIS in June 2009
in Verona
www.ecis2009.it
Paper Deadline:
Nov 30

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.... Questions, Comments, Complaints ?

Thanks for your attention !

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**Action Research, Design Science, and Participatory Design:
Three Approaches in Collaborative IS Projects & IS Publications**

Traditionally stressing the argument of relevance in the 'rigor versus relevance' debate, Action Research (AR), Design Science (DS), and Participatory Design (PD) have been applied successfully in collaborative Information Systems (IS) projects. The presentation outlines the characteristics of the three methods along their research contribution, roots, and methodological guidelines and - based on text analysis - explores similarities and differences of selected IS projects, each prominently published under one of those methods, often in method-specific publication outlets. The presentation postulates that many collaborative IS research projects, seemingly based on different methods, demonstrate remarkable similarities concerning research contribution, roots, and methodological guidelines. Thereupon, the presentation discusses implications for IS research communities. It points to opportunities when aiming at academic publications while facing the challenge of doing research 'relevant' to practice. Finally, the presentation purposefully stimulates an open discussion and looks forward to provocative counter-arguments from the audience.

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