Project management processes and practices for e-Learning efforts

Dr. Beverly Pasian
Associate Professor
Utrecht University of Applied Sciences
CIDER: December 7, 2011

Topics:

Research rationale: e-Learning and PM

Project management maturity (concept and limitations)

Opportunity of e-Learning project management

What it reveals: processes, practices

Future possibilities: researchers, practitioners

Explore uniqueness of
e-Learning project management

(my research rationale)

The management of e-Learning projects at universities

An e-Learning project as a specific project type

...to expand the conceptual and practical boundaries of project management maturity

Historical context of 'maturity'

Came out of post-WW2 environment

Emphasis and appeal: to manufacturers
serving a civilian community

Management focus:
high quality based on efficiency

Process control was the key driver

Achieve goals by minimizing variation

Focus of manufacturers was to achieve quality by defining, repeating and predicting processes

Effect: performance would increase, costs would stabilize

Consider...

Who / what does this serve?

Building a house.

Manufacturing a car.

Making a hamburger.

Move ahead 40 years, the project management community adopted process control as a sign of maturity....

(despite a lack of definition)
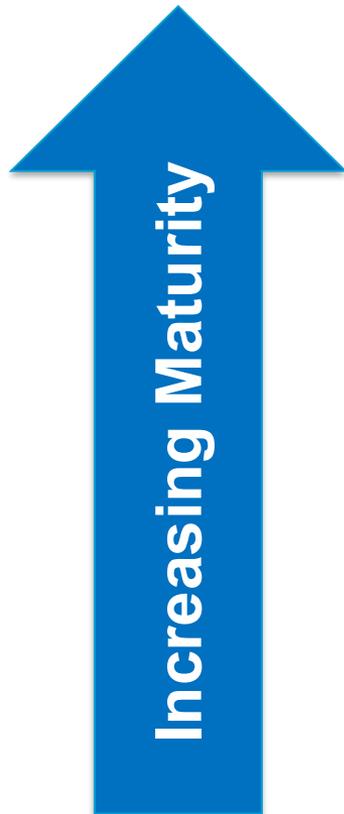
An new era for the PM community

Managing the software process (1988-89)

The Capability Maturity Model (SEI/CMM)

***Help US DoD assess contractors' <u>processes</u>
in performing software projects.***

A tool for measuring maturity: as processes become...

Increasing Maturity →

Optimizing	Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.
Managed	Detailed measures of the processes and product quality are collected. Both the process and products are quantitatively understood and controlled.
Defined	Processes are documented, standardized, and integrated into a standard process for the organization. All projects use an approved, tailored, version of the organization's standard process for developing and maintaining software.
Repeatable	Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on projects with similar applications.
Initial	The process is characterized as ad hoc, and occasionally even chaotic. Few processes are defined, and success depends on individual effort.

Problems ...

1. There is no universal definition of project management maturity.

2. Project management maturity is determined by what the model says is important.

3. Project management maturity models reflect a limited history emphasizing process control...*which best serves certain project types.*

Other Issues …

- Project types and environments have multiplied and increased in complexity

- Projects lacking definition may be managed using unique, unpredictable, unrepeatable processes to achieve project goals

Why education…and e-Learning?

- **Is it reasonable to apply the process control metrics used in a manufacturing setting to (for example) EDUCATION?**

- Emblematic of a project where you don't know the outcomes
- Flattens education
  – The array of and access to content shifts emphasis from silos of information to horizontal themes
- Reduces barriers (not standards)
- My background!

What are the non-process factors behind the management of e-learning projects?

Showcase e-Learning project management
Contribute to theory in e-Learning <u>and</u> project management

My research strategy:

1. Analyze other maturity models to see how they define maturity.

2. Develop conceptual framework

3. Conduct case study in 3 different universities to see how they manage e-Learning projects.

1. Compare, analyze Maturity models

PM maturity models
(1st generation)

Construction Project Management Maturity Model

Project Management Process Maturity Model

Evolutionary Software Project Management Maturity Model

Strategic Project Management Maturity Model

OPM3

Prince 2 Maturity Model

Portfolio, Programme and Project Management Maturity Model

The Project Management Maturity Model

ProMMM

But what are they measuring?

Management
Organization
Process management
Process, Tool development
Awareness
Business Case & Benefits
Project specifications
Formality
PM Office
Risks and Management
Training
Communications
Quality management
Data management
Continuous improvement
PM process analysis

Other models...

Data Warehousing Maturity Model	Malcolm Baldridge National Quality Award
Design Safety Capability Maturity Model	Capability Maturity Model
Developmental Maturity Model	People Capability Maturity Model
e-Learning Maturity Model	Standard Testing Maturity Model
Knowledge Management Maturity Model	Ascospore Maturity Model
Model-drive Development Maturity Model	Corrective Maintenance Maturity Model
Computer Education Maturity model	Information Systems Action-Research Maturity Model
Evolutionary Software Project management Maturity model	Knowledge Management Maturity Model
Value-based business-IT Alignment Maturity Model	Leadership Maturity Model
Process and Enterprise Maturity Model	Online Course Design Maturity model
Moisture-modified Maturity Model	Prosci's Change Management Maturity Model
Requirements Engineering Maturity Model Framework	Engineering Education Capability Maturity model
Maturity Model for Criminal Organization	Software Maintenance Maturity Model
Maturity model for email communications	Innovation Maturity Model

Indicated..

Culture
Customer
Organizational & management policies
Leaders, champions (individual roles)
Interface with host organization
Specific processes
Quality
Resources
Business Case & Benefits
Problems, Variations, Defects
Training
Organizational , Environment
Continuous Improvement
Project characteristics
Chaotic references
Risk Management

Let's compare…

Management	Culture
Organization	Customer
Process management	Organizational & management policies
Process, Tool development	Leaders, champions (individual roles)
Awareness	Interface with host organization
Business Case & Benefits	Quality
Project specifications	Resources
Formality	Business Case & Benefits
PM Office	Problems, Variations, Defects
Risks and Management	Training
Training	Organizational , Environment
Communications	Continuous Improvement
Quality management	Project characteristics
Data management	Chaotic references
Continuous improvement	Risk Management
PM process analysis	

Step 2:
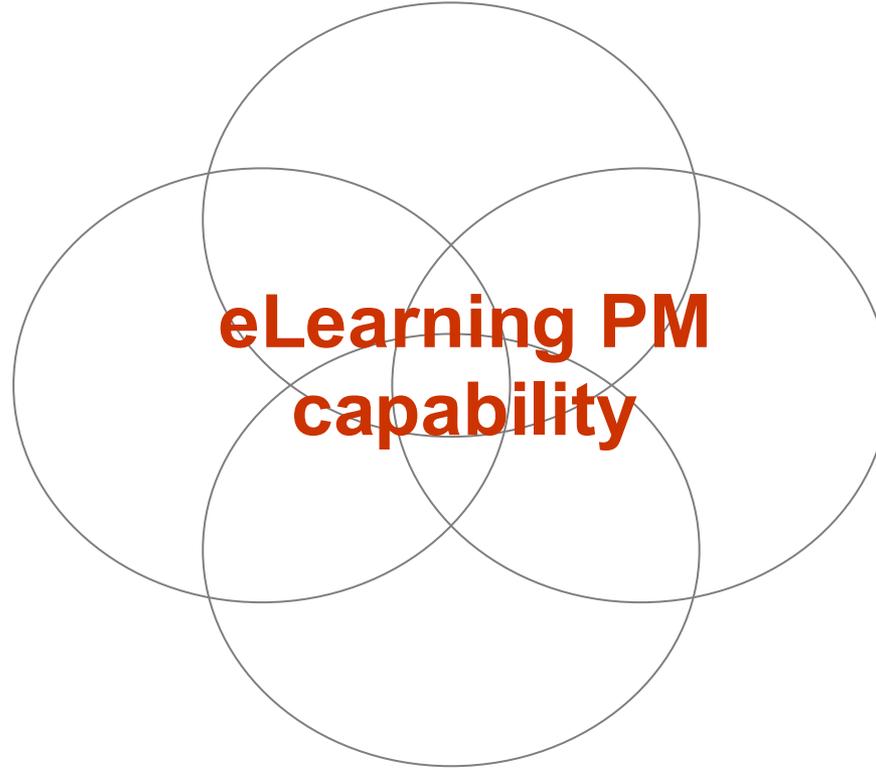# Develop a conceptual framework

Contributors to framework

- Considered other non-process views of maturity (from the model analysis)

- Human factors are relevant (literature, pilot)

- Factors specific to higher education must be considered (literature, pilot)

Customer involvement

Adaptable variants

Defined processes

eLearning PM capability

Dynamic non-events

Definitions

- Customer involvement: students, faculty, 'someone who benefits' (Jones, 2004)
- Defined processes: ADDIE model (Moore & Kearsley, 1996)
- Dynamic non-events: human factors (Weick & Sutcliffe, 2001)
- Adaptable variants: a common, changeable element (e.g. leadership)

- Jones, D. 2004, 'The conceptualisation of e-Learning: lessons and implications,' *Studies in Learning, Evaluation Innovation and Development*, Vol. 1, no. 1, pp. 47.55.
- Moore, M.G. & Kearsley, G. *Distance Education: A Systems View*, Wadsworth Publishing Company, Belmont, CA.
- Weick, K.A. & Sutcliffe, K.M. 2001, *Managing the Unexpected: Assuring High Performance in an Age of Complexity*, Jossey-Bass, San Francisco, CA.

Step #3: Case study to confirm, reveal non-process factors

Step 3: Case study

- 3 universities:
  - Mid-large, urban, same city
  - Teaching & learning development units
- e-Learning project team and associated collateral
  - Dean / Director, department head, instructional designer, educational technologist, subject-matter expert

What did I find?

Myriad non-process factors used to manage e-Learning projects <u>reliably</u> that would be considered 'immature' in project management

What are those factors…
and how are they used in the management of e-Learning projects?

'Customer' involvement

Agendas

Experience

Knowledge

Perspectives

Reactions

Skills

Adaptable variants

Academic freedom: values

Culture

Expertise

Interface-organization

Leadership

Problem resolution

Teamwork

'Dynamic non-events' (human factors)

Acceptance

Attitude

Commitment

Loyalty

Motivation

Trust
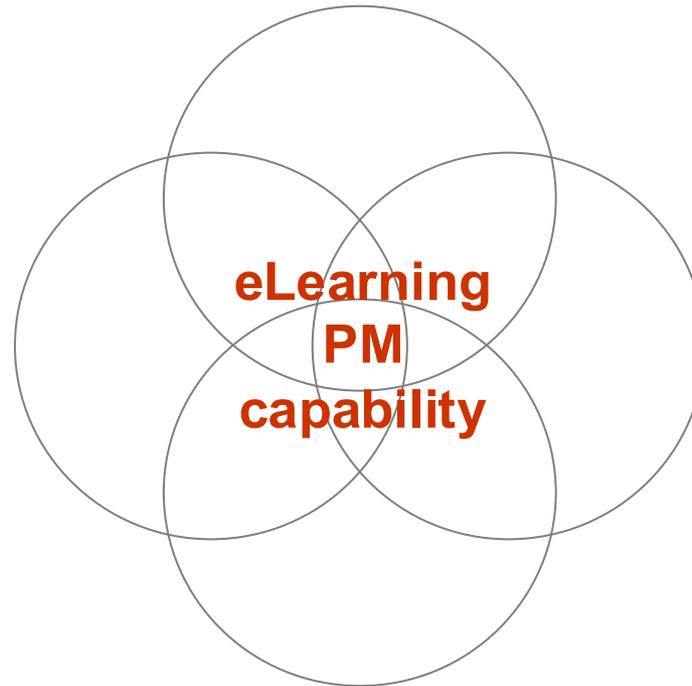
Defined processes

Assess

Design

Develop

Implement

Evaluation

Closure

Resulting in a new model… could be used for assessment or direction

So how should you foster a mature e-Learning project management capability?

(broadly speaking!)

Broadly speaking...

1. Involve the customer / stakeholder.

2. Foster an adaptable environment.

3. Respect 'human factors' (e.g.trust).

4. Support defined processes where they make sense.

5. Operationalize these factors to your organization.

The challenge to researchers...

Closely examine all roles of e-Learning project management team
(start with the instructional designer)

Research institutional implementations (currently applying model to Moodle implementation at MacQuarie University, AUS)

Document everything!
(this research easily lends itself to actual management of e-Learning projects)

Research questions for me…

- What is the weight of each elements?

- What happens when applied to program and portfolio management?

- Under what circumstances do the factors become more or less influential?

- What can other project types tell us?

Thoughts of the future (from 2008)…

The future of e-Learning (ISSOTL 2008)

Adapted content
Advising & counselling
Agents & avatars
Animations
Assessments
Audio
Blended learning
Blogging
Brain-based learning
Business-based learning
Collaborative & cooperative learning
Competency-based learning
Creativity and innovation
Discussions
eBooks
eDrama
eScience
Exhibits
Experiential learning
Games
Immersive environments
Inquiry-based learning

Interactive learning activities
Language learning
Learning objects
Live presentations & webinars
Mapping
Metacognitive learning
Metaphorical learning
Narrative learning
Open & free content
Podcasting
Polls, questionnaires & surveys
Problem-based learning
Project-based learning
Remote sensing
Scenario-based learning
Simulations
Situated learning
Tours
Video-enhanced learning
Visualization
Webquests
Wiki content
Workflow learning

Why e-Learning project management?

Better planning could lead to better learning.

Thank you

Beverly Pasian, M.A. (ODE), DPM
Beverly.pasian@hu.nl
Utrecht University of Applied Sciences

Notable publications

http://hdl.handle.net/2100/1258
(full Pasian thesis)

Special journal issue (2011, Vol.2):
Journal of Project, Program and Portfolio Management

Gower Publishing book (commissioned):
Project Management Research Methods

New Journal (in development for consideration by AU Press):
Plan to Learn:
research of the implementation of ICT-learning projects