Learning in multidisciplinary teams leading technology change and adoption

Mandy Lacy – Hanover, Germany – June 2015
An invitation

You are invited to attend this learning event on researching multidisciplinary teams leading new technology implementation change and adoption. This blog is a way of providing more information and also to begin engagement with you before the workshop.

The workshop will bring together our experiences of working with teams dealing with new technology implementations. You will have the opportunity to apply thinking from transactional analysis perspectives when considering individual, team and organisational change and adoption.

Included in the day will be a brief overview of my research project approach, methodology and theories involving problem structuring methods, expensive learning and transdisciplinary leadership. Followed by transactional analysis concepts for consideration when investigating individual and systemic resistance, early adoption processes and strategies.

As an experiential workshop you will be able to examine your own experiences, thinking and solutions through a pluralist lens of several methods and concepts. Then share application to your own situations for the experience of transdisciplinary learning as a community of practice.
Today

- Global View
- German Lens
- Own Cases
- Research Overview
- Learning Experiences
- Change & Adoption
- Hungers & Appetites
- Application
- Summary
Area size comparison of Australia and Europe

Australia’s area = 7,706,168 sq km
Europe’s area as shown = 3,483,066 sq km
What Happens in an Internet Minute?

- 639,800 GB of global IP data transferred
- 20 New victims of identity theft
- 47,000 App downloads
- 61,141 Hours of music
- 204 million Emails sent
- 83,000 In sales
- 20 million Photo views
- 320+ New Twitter accounts
- 3,000 Photo uploads
- 100,000 New tweets
- 135 Botnet infections
- 1,300 New mobile users
- 100+ New LinkedIn accounts
- 277,000 Logins
- 2+ million Search queries
- 6 million Facebook views
- 1.3 million Video views
- 30 Hours of video uploaded

And future growth is staggering:

Today, the number of networked devices = the global population
By 2015, the number of networked devices = 2x the global population
In 2015, it would take you 5 years to view all video crossing IP networks each second.
Virtual and online communities will outgrow geographical and physical populations.

- China: 1.34 billion
- India: 1.24 billion
- Facebook Nation: 1.23 billion
SHARE AT THE RIGHT TIMES

Different social networks have different peak times for posting. Take advantage!

- Facebook: 1pm to 4pm
- Twitter: 1pm to 3pm
- LinkedIn: 7am to 9am, 5pm to 6pm
- Google+: 9am to 11am
- Pinterest: 2pm to 4pm, 8pm to 1am
Something interesting is happening.

TOM GOODWIN
The German Lens

5 COUNTRIES OFFER THE BEST MARKET CONDITIONS FOR STARTING AN mHEALTH BUSINESS IN EU

Comparison of country’s rank in market readiness score and developer index

Developers rank – country rank by developers and decision makers,
Market readiness rank – rank of country based on eHealth adoption, level of digitalization among population, market potential, ease of starting business, mHealth regulations

Copyright research2guidance 2015
Source: research2guidance - EU countries’ mHealth app market ranking 2015, n = 4,471

BERLIN, GERMANY - (HealthTech Wire / News) - Germany is among Europe's leading nations when it comes to scientifically researching and implementing telemedicine applications.

Major clinical studies on the telemedicine monitoring of outpatients suffering from chronic illnesses, with regard to vital parameters in cases of heart insufficiency, have taken place in Germany.

http://www.hitcentral.eu/healthtech-wire/conhit-2014-telemedicine-important-factor-business
Your Experience and Cases

From your experience and observations of technology disruption / implementation - what have been the:

- Enablers
- Inhibitors
- Drivers
- Culture

@ team meetings
@ individual level
@ leadership
@ projects, consultancy, coaching, training, other
Learning in Multidisciplinary Teams Leading Technology Change & Adoption

Approaches:

• Expansive Learning
• Transdisciplinary Leadership
• Problem Structuring Methods
Research

- **Approach:**
  - Realistic evaluation
  - Theorising

- **Theories**

- **Methods:**
  - Design Based Research
  - Data collection from

- **Subjects:**
  - Telehealth

- **Situational Lens**
  - Team Meetings

- **Current position**

- **TA Connection - PSM**
Research is about gaps ...... and interesting Questions

Alvesson & Sandburg 2011

‘it is increasingly recognised that what makes a theory interesting and influential is that it challenges our assumptions in some significant way’ (p.247)

• What is interesting to notice?
• What is the mystery or problem to solve?
Figure 2: Realistic evaluation cycle as applied to this study.
Two-phase research approach:

- **Phase 1:** The prestudy or discovery phase or an early and imaginative phase of theorizing that can consist of:
  - observations
  - naming and formulating the central concepts
  - building out a theory

- **Phase 2:** The main study or the phase of the major research and justification and consists of:
  - drawing up the research design
  - execution of the research design
  - writing up the results. (p. 10)
Expansive Learning - Engestrom 2009

directionality of learning and development
Activity Theory

- ‘a framework for understanding human interaction through their use of tools and artifacts’
Epistemic Objects
Ewenstein & Whyte 2009)
‘relatively stable or in flux; as abstract or concrete; and is used within or across practices
Problem Structuring Methods

Problem structuring methods (PSMs) are a broad group of model-based problem handling approaches whose purpose is to assist in the structuring of problems rather than directly to derive a solution. They are participative and interactive in character, and normally operate with groups rather than individual clients.
Transdisciplinary Leadership
McGregor & Donnelly 2014
solving problems as the centre of transdisciplinary practice – not the disciplines

A. Generic (Pooled interdependence)
   “MULTIDISCIPLINARITY”
   Co-ordination by standardization (system-wide)
   Investment into the whole system (systemic goals)

B. Sequential Interdependence
   “INTERDISCIPLINARITY”
   Co-ordination by planning (Inter-systemic goals)

C. Reciprocal Interdependence
   “TRANSDISCIPLINARITY”
   Co-ordination based on integrated input/output (individual and systemic goals in dialogue)
   Investment into the uncertainty generated by pooled sequential interdependence

Information inputting
- Each stakeholder represented
- Multiple closed systems interacting within an open system

Throughputting
- Each stakeholder contributing
- Planned disciplinary interaction

Homeostasis
- Each stakeholder affecting
- Reorientation.
Disruptive Innovation Theory
Christensen 1997, 2006; Yu & Wang 2010
Is from the challenges and disruptions technology brings – innovations of existing products

Identified five key responses

• focus on and invest in the traditional business,
• ignore the innovation – it’s not your business,
• attack back – disrupt the disruption,
• adopt the innovation by playing both games at once and
• embrace the innovation completely and scale up.
Methods

Design Based Research is characterised as an inter-disciplinary mixed-method research approach conducted ‘in the field’ that serves applied and theory-building purposes.

- Reimann 2010

Data collected from: case studies, video recordings, surveys, interviews
Hypothesis

When leading technology implementation, multidisciplinary team meetings are a place for explicit learning on many levels ways:

– individually
– as a team
– over time
– From structuring problems
– through trans-leadership
– in parallel with key stakeholders.
Research Questions

Proposed:
• What learning, objects and artifacts naturally occur at team meetings?
• How do introduced objects and artifacts facilitate learning and knowledge building?
• How is transdisciplinary leadership naturally and deliberately applied at team meetings?
• What expansive learning happens over time in MDT leading C&A?
• How do PSM facilitate learning at various levels? TA
• How are individual implicit and explicit learning needs at MDT meetings identified/known? TA

What is interesting to ask and the mystery to solve?
FOMO

https://youtu.be/VweJslpISbE
Learning, Technology & You

- How do you
- What helps
- When is best
- Why
- Emotions
- Reactions to others
- Influence of situations
# Change & Adoption

**Everett Rogers — Diffusion of Innovations 1995/2003**

## Diffusion of Innovations

<table>
<thead>
<tr>
<th>Innovators</th>
<th>Early Adopters</th>
<th>Early Majority</th>
<th>Late Majority</th>
<th>Laggards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tech Enthusiasts</strong></td>
<td>Visionaries</td>
<td>Pragmatists</td>
<td>Conservatives</td>
<td>Skeptics</td>
</tr>
<tr>
<td>Volunteer</td>
<td>Driven by dream of change</td>
<td>Values productivity</td>
<td>Prefers tradition, stick with things that work</td>
<td>Only block change</td>
</tr>
<tr>
<td>Want to be 1st</td>
<td>Personal recognition</td>
<td>Will pay for service</td>
<td>Change needs to be simple, cheap, does not interrupt</td>
<td>Doubts change will bring promised returns</td>
</tr>
<tr>
<td>Usually no buying power</td>
<td>Ref on 1st projects</td>
<td>Others do the change</td>
<td>Show those who survived</td>
<td>Neutralise with the bigger picture for everyone</td>
</tr>
<tr>
<td>Let them play</td>
<td>$ least concerned</td>
<td><strong>Show how you can improve their day</strong></td>
<td></td>
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</tr>
</tbody>
</table>
“If I had asked people what they wanted, they would have said faster horses.”

—Henry Ford
“Don’t forget your magical inner child”
## Technology and Hungers

<table>
<thead>
<tr>
<th>Hunger</th>
<th>Satisfaction</th>
<th>Overindulgence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulus</td>
<td></td>
<td></td>
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<tr>
<td>Recognition</td>
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<td></td>
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<tr>
<td>Structure</td>
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</tbody>
</table>
Hunger theorists

- Berne 1972
- Barnes 1981
- Erskine 1998
- Meredith 2001
- Sills & Hargenden 2003
- Cornell 2008
- Mountain & Davidson 2011
- Lacy 2015
Berne

- Stimulus (sensation) is the need for sensory input from others and the need of being with others (1972)
- Recognition hunger encompasses all the ways we seek recognition – both negative and positive
- Structure hunger is that of needing our time structured
Barnes 1981

Three levels that articulate internal and external manifestations – ‘where do I fit in?'

• At the

1. Existential level there is position hunger
2. Social level there is structure hunger
3. Psychological level it is recognition hunger
Motivation theory

• ‘hungers for stimulus, structure and recognition are interwoven, interactive and interdependent (and) operate as a dynamic motivational system’. (p. 132-142)
Meredith 2000

- Control as the 4th psychological hunger
- ‘that the desire for control is a natural psychological hunger, satisfied by empowerment, stability and connection’. (p.285)
- And that by analysising the motivators of human behaviour that includes control – offers more for understanding of ourselves and others
Two main tasks that are essential to human beings:

1. Is related to structure and stimulation which ‘is striving to master our environment’ and

2. Land to recognition hunger which ‘is our need to be in relationship’ (p. 21-22)
• Describes hungers as ‘an active force, a force of activity, not just to relieve itself of its tensions on a field of object but to seek things, people, stimulation, and so on, and take them in.’ (p. 172)

• Also that ‘these hungers live among themselves within the human psyche in a constant, rather competitive dialectical tension’.
Mountain & Davidson 2011

- Biological hungers that are ‘biological driven needs that are the motivating force for human beings’. (p.70)
- too little = apathetic, too much = burnt out
- Recognition as stimulus
  - 1. Stimulus, 2. Belonging
  - ‘everyone needs to feel a sense of belonging and it is this aspect that enables us to feel safe enough to offer our thoughts and opinions since we feel valued’ (p. 71)
Lacy 2015 theorising

• Appetite of Change:
  – for individual, group and trans learning
  – of both passive and active resistance and enthusiasm/engagement

• That each of these theories, concepts and aspects either separately or combined - influences our motivation for learning and knowledge building when it comes to our engagement and experience of technology either individually or in groups.
Core (Berne)
Levels & Position (Barnes)
Tasks (Hargenden & Sills)
Control (Meredith)
Balance & Belonging (Mountain & Davidson)
Internal appetite for change

**Core - Berne 1972**
- Stimulus, Structure, Recognition

**Levels & Position - Barnes 1981**
- Where do I fit in?
- Social, Existential, Psychological

**Control - Meredith 2001**
- Empowerment, Connection, Stability

**Tasks - Hargenden & Sills 2003**
- 1. Striving to master environment
- 2. Need to be relationship

**Learning - Lacy 2015**
- Individual, Group, Trans & Expansive Learning

**Balance & Belonging - Mountain & Davidson 2011**
- too much, too little
- culture, nature, humanity
- to others, communities
Questions

individual, observation, experience

- Core: sensations, recognition, structure noticed
- Levels: fitting in on a social, existential and psychological level?
- Control: Rate of satisfaction of being empowered, feeling stable and connected?
- Tasks: Over or under compensating to master the environment, and to be in relationships
- Balance: +ve and –ve experiences & sense of belonging
- Motivation: what are the motivators
- Seeking Experience: what active forces are in place (or not)
In closing ........

It is a bit freaky with this wireless technology
Thank You

PEOPLE ARE THE PRIMARY PURPOSE

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