

Learning how to learn, to adaptively manage social-ecological systems

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Flirting with learning

- All organisations learn ...
- Few organisations deliberately advance their learning; rare to observe
 - Inspiring learning practices,
 - research dedicated to understanding how we learn, or
 - explicit strategies for improving our learning proficiency.
- Most organisations flirt with the concept of “a learning organisation”
- Yet, in times of change, our ability to learn is critical
- But organisations are typically designed to do, not to learn
- How then do we increase our learning proficiency?

Outline

- Defining the learning organisation
- Experiential learning
- Social learning

- What knowledge should be created?
- How should knowledge be created?
- Culture for knowledge creation

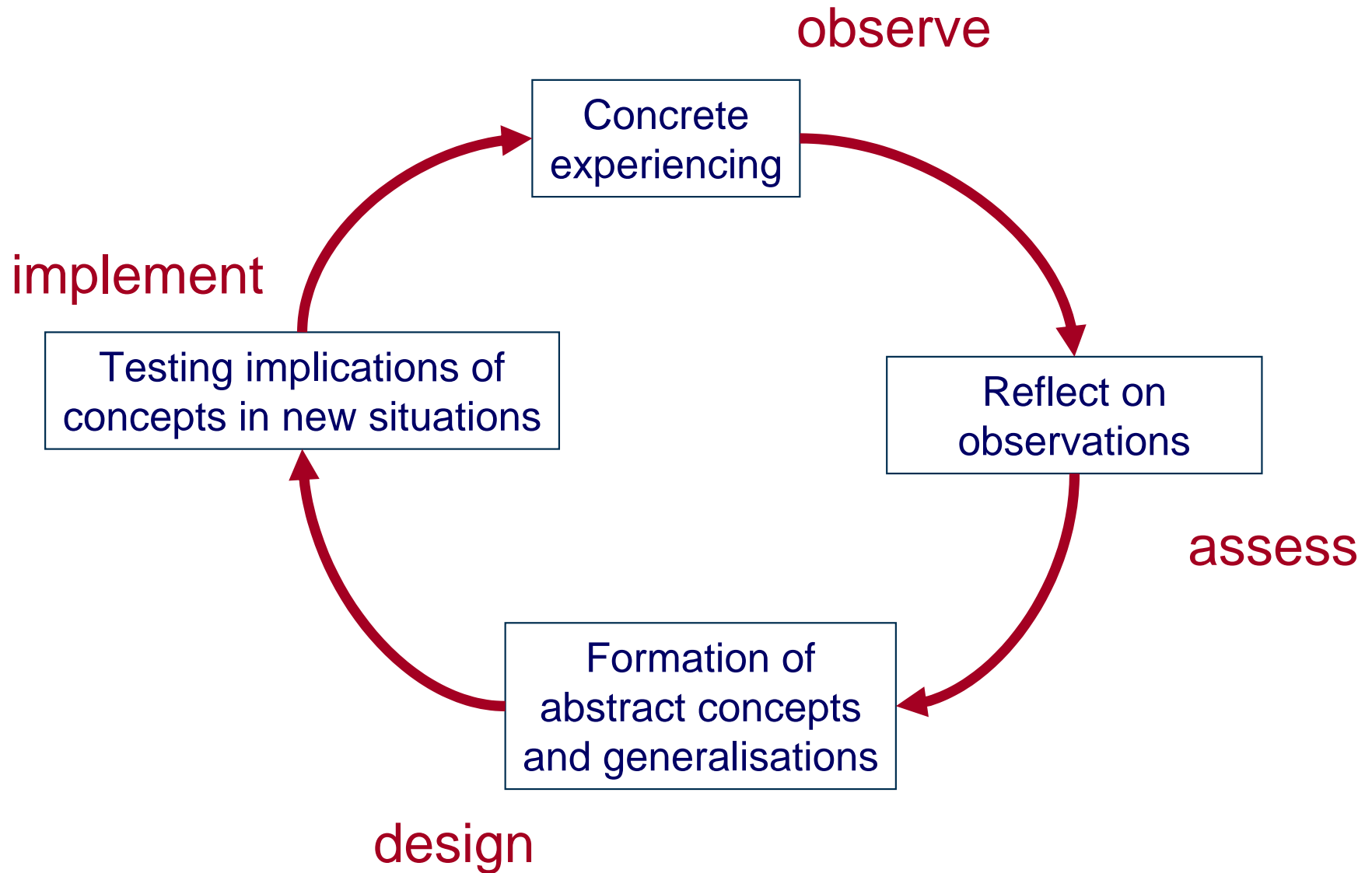
- KNP case study
 - Learning audit
 - Main conclusions

Learning organisation

- Learning belongs to the learner
- Organisations learn via their individual members
- Learning
 - acquisition of skill or know-how
 - acquisition of know-why
- Learning organisation 1: *“an organisation skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights”* (Garvin, 1993).
 - Cognitive step – members are exposed to new ideas, expand their knowledge, begin to think differently
 - Behavioural step – members internalise new knowledge and begin to alter their behaviour
 - Performance improvement – changes in behaviour lead to measurable improvements in results / outcomes

need both

Experience as source of learning



Kolb DA. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Prentice-Hall, Englewood Cliffs, New Jersey.

Learning as a social process

- Link between individual and organisational learning
 - Fragmented learning
 - Opportunistic learning
- Learning through observation (Albert Bandura)
- Learning through participation (CoP)
- Zone of proximal development (Lev Vygotsky)
- Participate in broad learning systems

knowing is to participate rather than to own

What knowledge should be created?

Depth and breadth

- Depth of learning enables breadth of application
- Knowledge depth in one discipline enables knowledge acquisition from a related discipline
- Do we require depth in all core disciplines?
- Allow some mavericks to explore in non-core areas

How should knowledge be created?

A certain slowness and time for reflection

- Modern society values action and not reflection. % time for operational fire fighting, strategic activities, new learning?
- Time available for reflection determines the temporal bracket of the past and future that we can engage.
Unreflective speed will always return you to the same place
(Paul Cilliers).
- Chess masters requires between 50 000 and 100 000 hours of practice to reach level of mastery (50 000 familiar patterns)

Culture of knowledge creation:

Adaptability and unlearning

- *Centuries ago, an individual's knowledge would last a lifetime, indeed knowledge would be passed down generations and still be highly useful. This has changed ... today knowledge becomes rapidly obsolete – hence the need to consider the unlearning process (Delahaye, 2000)*
- Unlearning is the process by which individuals and organisations release prior learning.

Adaptability and unlearning

Trained incapacity (Miller and Morris 1999) – the more we know about something ...

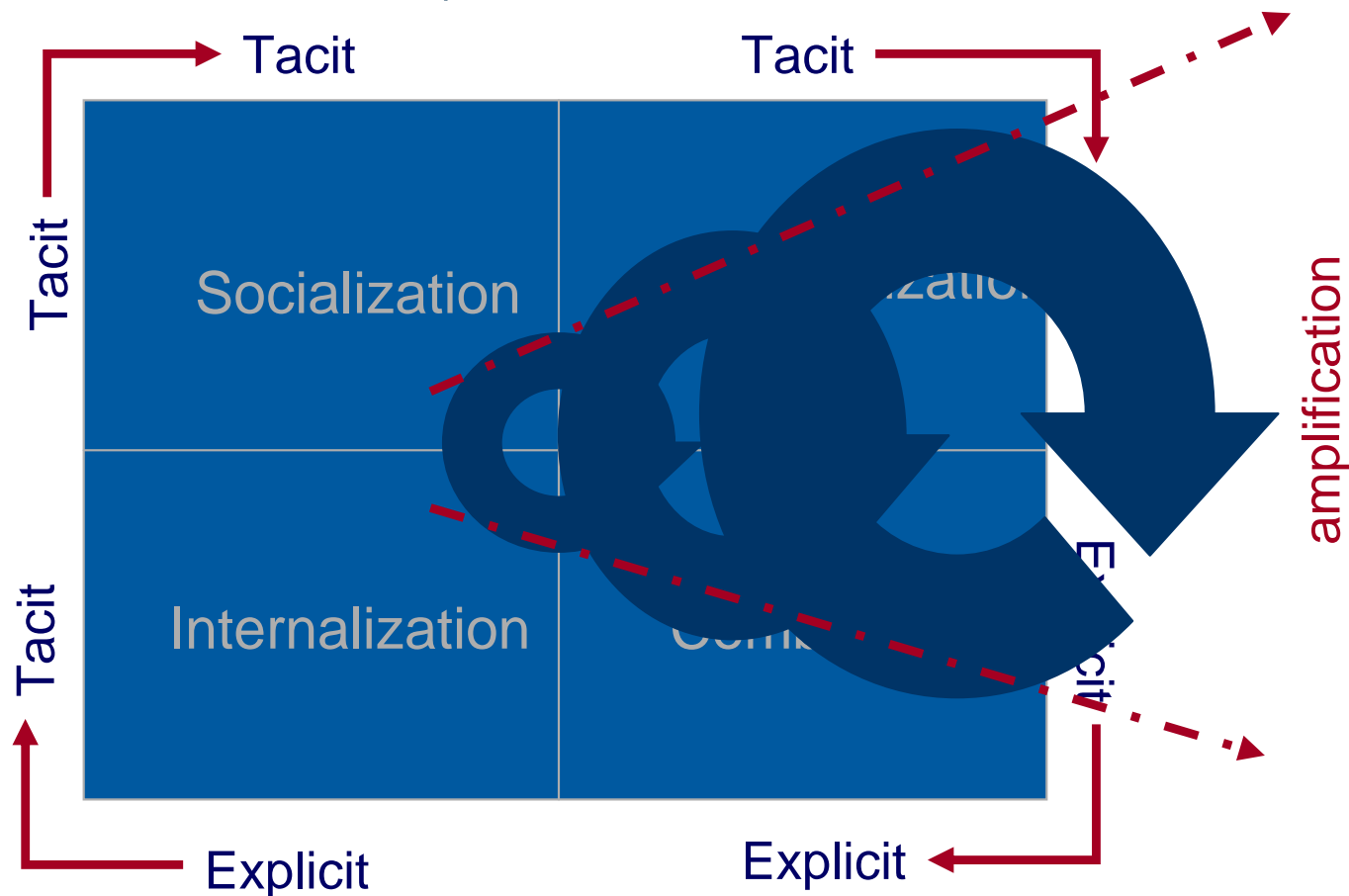
Path of selective exposure (Rogers 1995) – learning proficiency is highest when ...

Proactive inhibition (Lyndon 1989) – protect knowledge already acquired by disregarding ...

Recently acquired knowledge may be easier to relinquish (Becker 2005)

Organisational memory

- How organisations encode, store, and retrieve the lessons of history despite the turnover of personnel and the passage of time (Levitt and March, 1988)



Nonaka and Takeuchi (1995) *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.

KNP case study

- Developed 42 indicators for:
 - 11 learning principles (*Common future focus, Prior knowledge engagement, Transdisciplinarity, Learning by doing, Social knowledge sharing, Patience, Positive persistence, Empathy, Adaptability, Synergism, Experimentation*),
 - 6 organisation abilities (*deal with complexity, change, information overload, significant decision-making, threats to sustainability, multi-dimensionality*), and
 - 2 enabling objectives (*information processing, data processing*)

KNP case study

➤ **Highest indicator averages**

- The unit and the network have substantial knowledge depth in critical core disciplines.
- Individuals get extensive hands-on practical experience in the field.
- There is considerable debate about the extent to which experiments on ecosystems should take place.

➤ **Existence of organisation abilities**

- The highest score was for “supportive working environment”.
- The lowest score was for “ability to deal with information overload”.
- The second lowest score was for “institutional memory”

➤ **Qualitative results**

- Highly motivated to learn
- Critical of own performance
- Compensate for loss of internal experience by searching outside

Concluding points

- *“The formalisation of organisational systems is successful to the extent that it enables informal systems”* (Etienne Wenger).
- Biggest obstacle to achieving ecosystem management ideals is lack of space to learn with understanding
ambience; frequency of interruptions; culture of group learning; space for reflection, deep emergence and relative isolation
- Thank you