Hochschule für Angewandte Wissenschaften Hamburg
Hamburg University of Applied Sciences

WORLD SUSTAINABLE DEVELOPMENT
TEACH-IN DAY

RIO+20
United Nations
Conference on
Sustainable
Development

Thinking differently about sustainability : experiences from the Open University

Martin Reynolds

Applied Systems Thinking in Practice Group
The Open University, UK
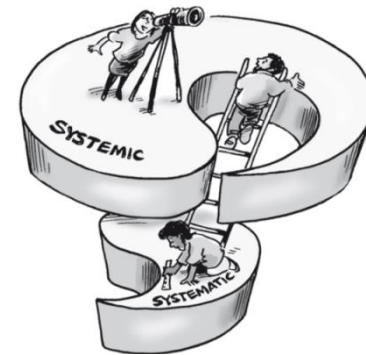
The Open University

Overview

1. The Open University and Systems Thinking in Practice

2. Challenges 1: learning for sustainability and systems thinking for sustainability

3. Systems thinking in practice: learning for sustainability

4. Challenges 2: institutional issues and further research

Systems Thinking in Practice

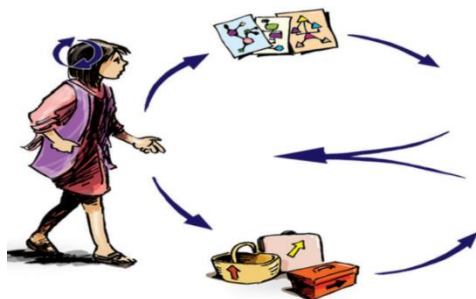**Postgraduate qualifications from the Open University**

2 Core modules part-time study - each with 6 months:

Thinking strategically: systems tools for managing change
TU811 – 30 credits

Managing systemic change: inquiry, action and interaction
TU812 – 30 credits

C72

Postgraduate Certificate in Systems Thinking in Practice 60 credits		
Option 1	Option 2	Option 3
TU811 (30 credits) + TU812 (30 credits)	TU811 (30 credits) + 30 credits from other relevant postgraduate modules	TU812 (30 credits) + 30 credits from other relevant postgraduate modules

E28

Postgraduate Diploma in Systems Thinking in Practice
120 credits

Postgraduate Certificate (60 credits) + extra 60 credits:

(2 x 30 credit modules or 1 x 60 credit module)

choose from relevant postgraduate modules;
must include TU811 and TU812 if you have not already completed both of these

F47

MSc in Systems Thinking in Practice 180 credits	
Postgraduate Diploma (120 credits) + extra 60 credits from:	
Professional route	Research route
T847 (30 credits) + 30 credits from relevant postgraduate modules not already completed for the Diploma	T802 (60 credits)

Systems Thinking in Practice

Postgraduate qualifications from the Open University

World Summit on Sustainable Development (WSSD)

"…a collective responsibility to advance and strengthen the interdependent and mutually **reinforcing pillars** of sustainable development - **economic** development, **social** development and **environmental** protection - at local, national and global level" (Hens and Nath, 2005 p.386).

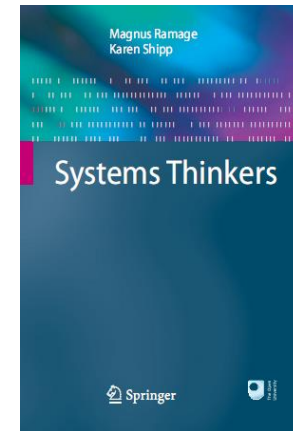**Learning for sustainability** $\Longrightarrow$ **Systems thinking for sustainability**

- *understanding* disciplinary perspectives (economic, social, biophysical)

- *practice* of interdisciplinarity (conversing with disciplinary boundaries)**….???**

- *praxis* of transdisciplinarity (learning as action) **….???**

Systems Thinking in Practice

Postgraduate qualifications from the Open University

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"…a collective responsibility to advance and strengthen the interdependent and mutually **reinforcing pillars** of sustainable development - **economic** development, **social** development and **environmental** protection - at local, national and global level" (Hens and Nath, 2005 p.386).

Learning for sustainability ⟹ **Systems thinking for sustainability**
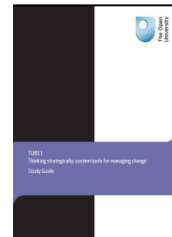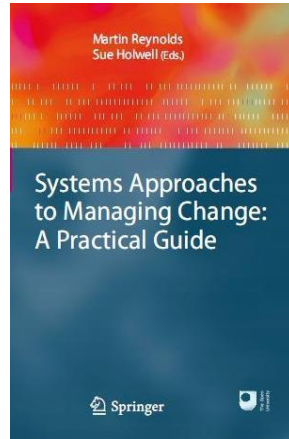
- *understanding* disciplinary perspectives (economic, social, biophysical)

- *practice* of interdisciplinarity (conversing with disciplinary boundaries)

- *praxis* of transdisciplinarity (learning as action).

- *Epistemic learning:* radical constructivism (disciplines not reified)

- *Social learning:* thinking *in* practice (pragmatism)

- *Design learning:* transformational praxis (within anthropocene epoch)
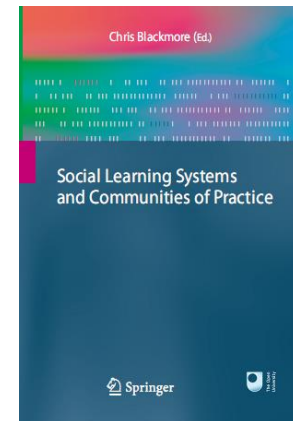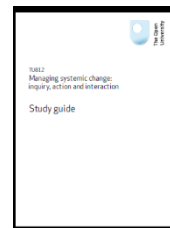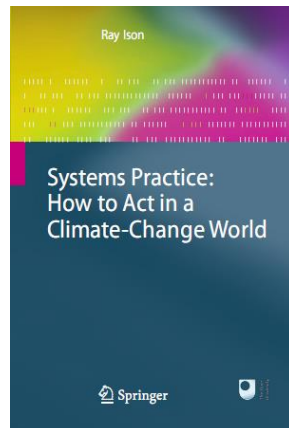
TU811

30 credits

Thinking strategically:
systems tools for managing change

Martin Reynolds
Sue Holwell (Eds.)

Systems Approaches
to Managing Change:
A Practical Guide

Springer

TU811
Thinking strategically: systems tools for managing change
Study Guide

Magnus Ramage
Karen Shipp

Systems Thinkers

Springer

Systems Thinking in Practice
Postgraduate programme

TU812
Managing systemic change:
inquiry, action and interaction

Study guide

Ray Ison

Systems Practice:
How to Act in a
Climate-Change World

Springer

TU812

30 credits

Chris Blackmore (Ed.)

Social Learning Systems
and Communities of Practice

Springer

Managing systemic change:
Inquiry, action and interaction

Systems Thinking in Practice

Postgraduate qualifications from the Open University

1. Developing epistemic understanding (epistemic turn)

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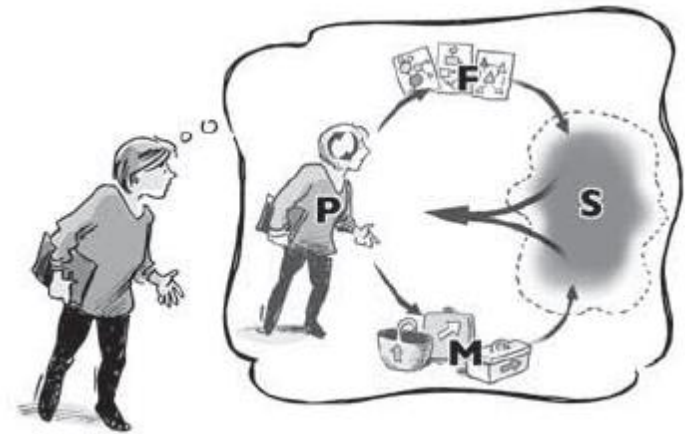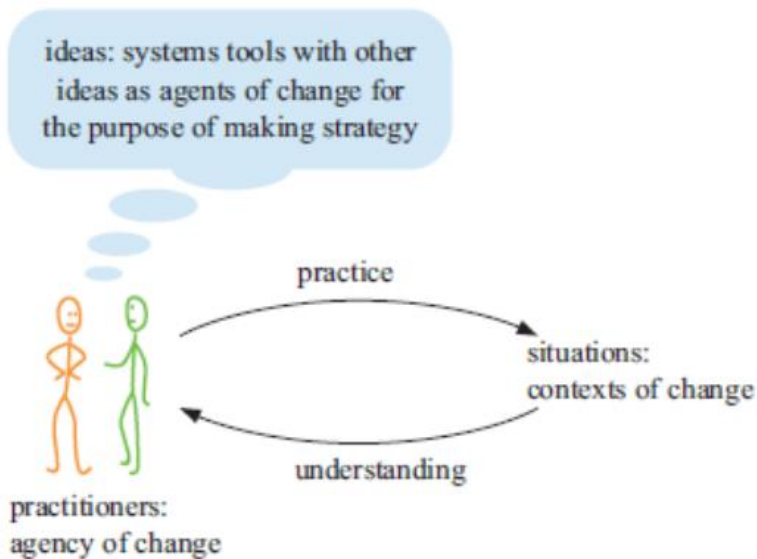<td align="center">TU811
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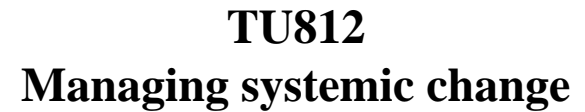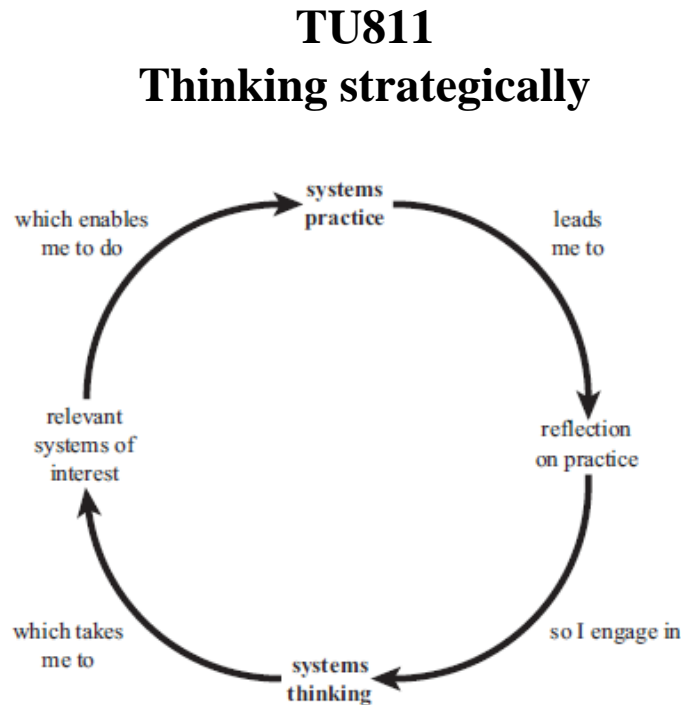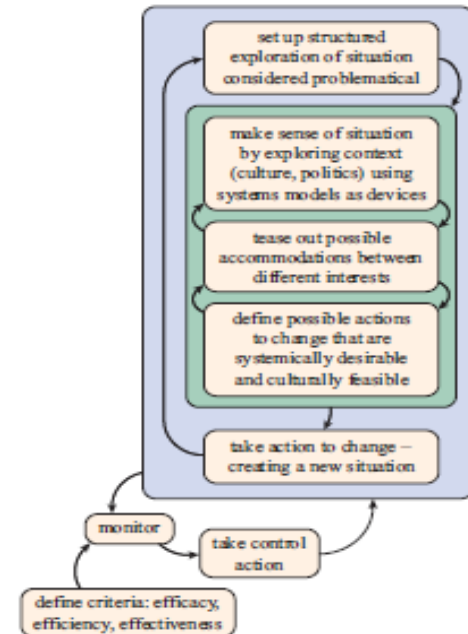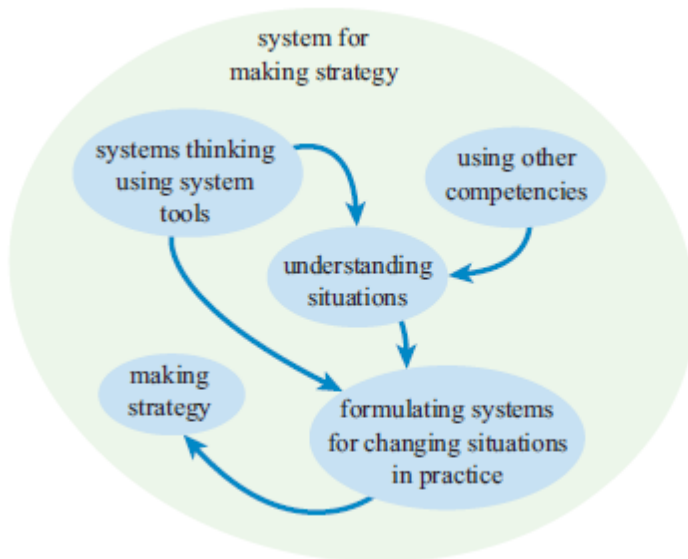</table>

Tools from 5 systems approaches Thinking in practice…Bricoleur (bricolage)

Systemic action learning (2nd order cybernetics) ...Juggler (juggling)

Systems Thinking in Practice

Postgraduate qualifications from the Open University

2. Developing active pedagogy (pragmatic turn)

**TU811
Thinking strategically**

**TU812
Managing systemic change**

1. Tools stream – 5 systems approaches
2. People stream – online critical reflection in use of tools

In an area of practice chosen by individual students

Reflective practice

Social learning/ landscapes of practice

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3. Developing design praxis (design turn)

TU811
Thinking strategically

$\Longleftrightarrow$

TU812
Managing systemic change

Assessment based on purposeful project design based on systemic inquiry
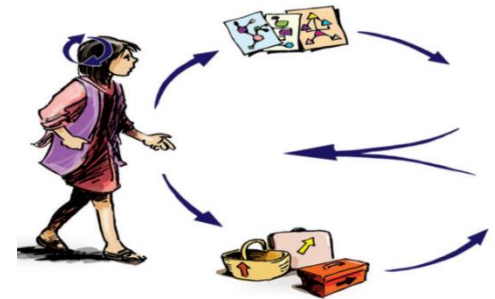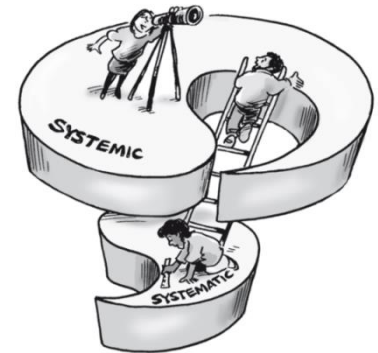
Systems Thinking in Practice

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Challenges of stystems thinking in higher education…Erich Jantsch (1970)!

"[a] systems approach…would consider science, education and innovation, above all, as general instances of purposeful human activity, whose dynamic interactions have come to exert a dominant influence on the development of society and its environments.

"A new policy as well as new structures for the university may be expected to emerge…designed explicitly with a view toward their innate capability for flexible change in accordance with the dynamically evolving situation" (Erich Jantsch, 1970 p.406)*.

*Jantsch, E. (1970). "Inter- and Transdisciplinary University: A systems approach to education and innovation." <u>Policy Sciences</u> **1**(1): 403-428.
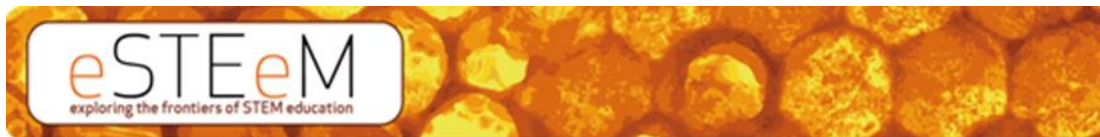
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Challenges within STiP (TU811 and TU812)

1. **Epistemic understanding of systems…ontology vs epistemology**

2. **Conversation and practice in virtual space…online STiP alumni**

3. **Institutional validity… HEIs assessment, REF recognition, Employer value**

Research inquiry: 18 month exploration of
    opportunities and constraints of systems thinking
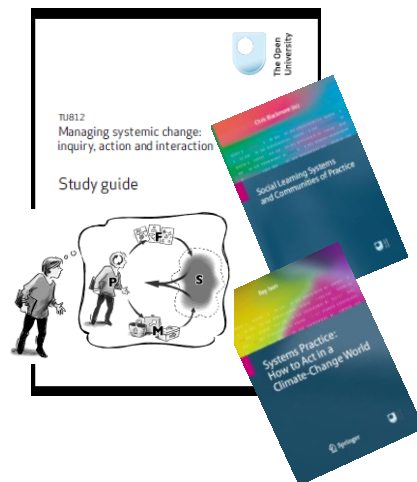   in practice for sustainable learning

Dr Martin Reynolds
Senior Lecturer and Qualifications Lead
Systems Thinking in Practice
Department of Engineering and Innovation
The Open University

Tel: +44 (0)1908 654894 (work)

Environmental Responsibility: ethics, policy and action
(30 credits PG) code TD866
PG programme in *Environmental Management*

Certificate, Diploma or Masters
in *Systems Thinking in Practice*