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From competence to capability: learning laboratories in postgraduate pedagogy

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eSTEeM
exploring the frontiers of STEM education

The Open University

From Competence to Capability
learning laboratories in postgraduate pedagogy

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Applied Systems Thinking in Practice (ASTiP) Group

**The 6th eSTEeM
Annual Conference
The Open University**

Date: 25 April 2017

Overview

- Developing capacity: final report of an 18-month eSTEeM project – **Enhancing Systems Thinking in Practice (STiP) at the Workplace** – completed in 2016.

- Capacity building at the OU: competency and capability?

- Teaching systems thinking (in practice) **competency**

- Coaching systems thinking in practice **capabilities**

- **Learning laboratories** for developing competency framework

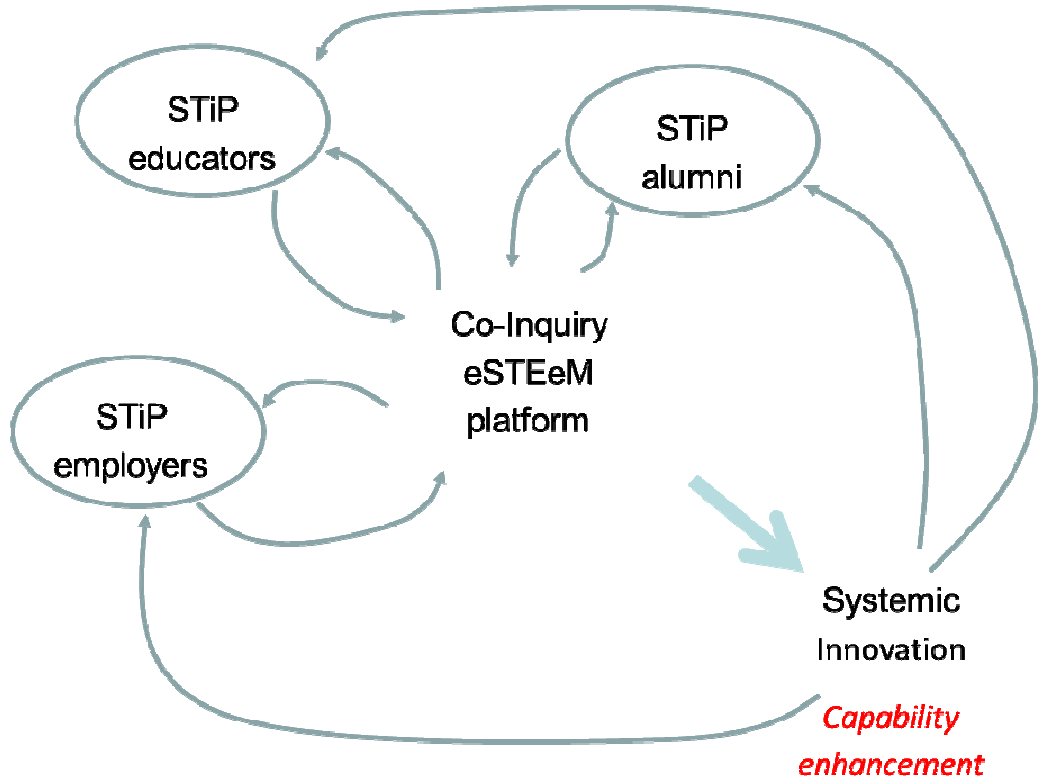- **Learning laboratories** for developing effective capabilities
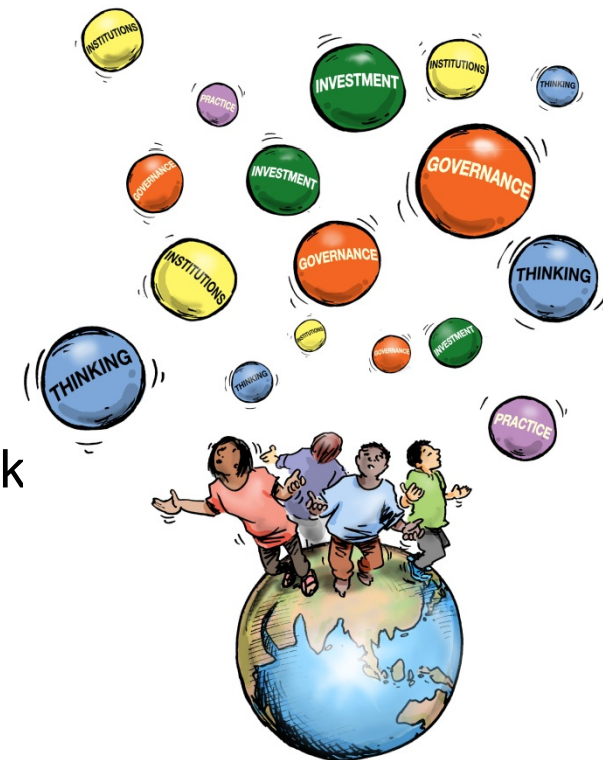
eSTEeM project: Enhancing systems thinking in practice (STiP) in the workplace (an alternative pathway of partnership for postgraduate curriculum development)

4 phases of systemic inquiry

January 2015 to August 2016 (c.18 months)

- Phase 1: Understanding existing PG situation of students (x10 interviews and x1 group follow-up video-conference meeting)

- Phase 2: Engaging with STiP alumni group and employers; feeding back on phase 1 (c.x16 interviews)

- Phase 3 : Developing systemic model of retention and recruitment (workshop)

- Phase 4: Dissemination
  - Working papers
  - Conference papers
  - Platform bid for wider systemic inquiry

STiP educators

STiP alumni

Co-Inquiry eSTEeM platform

STiP employers

Systemic Innovation

Capability enhancement

Phase 3: some recommendations from eSTEeM project

- co-design learning system with employers and alumni

- explore use of twitter and other social media for facilitating peer **conversations**

- promote workplace **coaching** with employers of STiP alumni

- explore partnership ideas with conventional HEIs and social enterprises on f2f complementarities (**blended leaning**)

- design modules **customise-able for professional development (**bespoke short courses)

- develop professional recognition of STiP through a **competency framework**

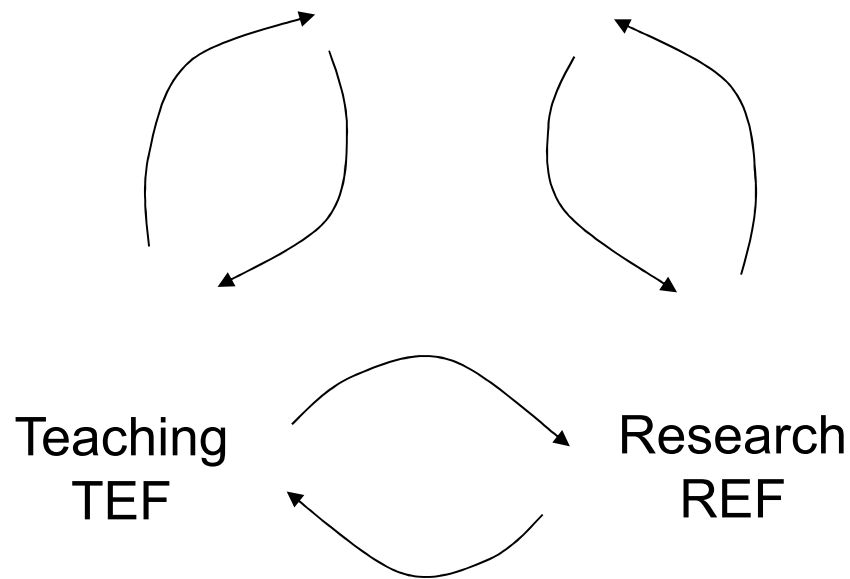eSTEeM phase 2: 'Competency' **in relation to** 'capacity' **and** 'capability'?

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

Unique features of OU: 'third mission'

Student First…OURedesign

Capacity Building?

Teaching
TEF

Research
REF

Capacity building with STiP
HEIs limited to developing competencies….

"Investment in systems literacy [**competency**] and then systems thinking in practice capability is missing in education as well as organizational life.

"The shift from sensibility [**capacity**] to **capability** is needed if purposeful action is to be pursued with some prospect of altering the current and anticipated human condition …"

"This is the challenge of 'Governing the Anthropocene' which […] is also the greatest challenge for systems thinking in practice…"
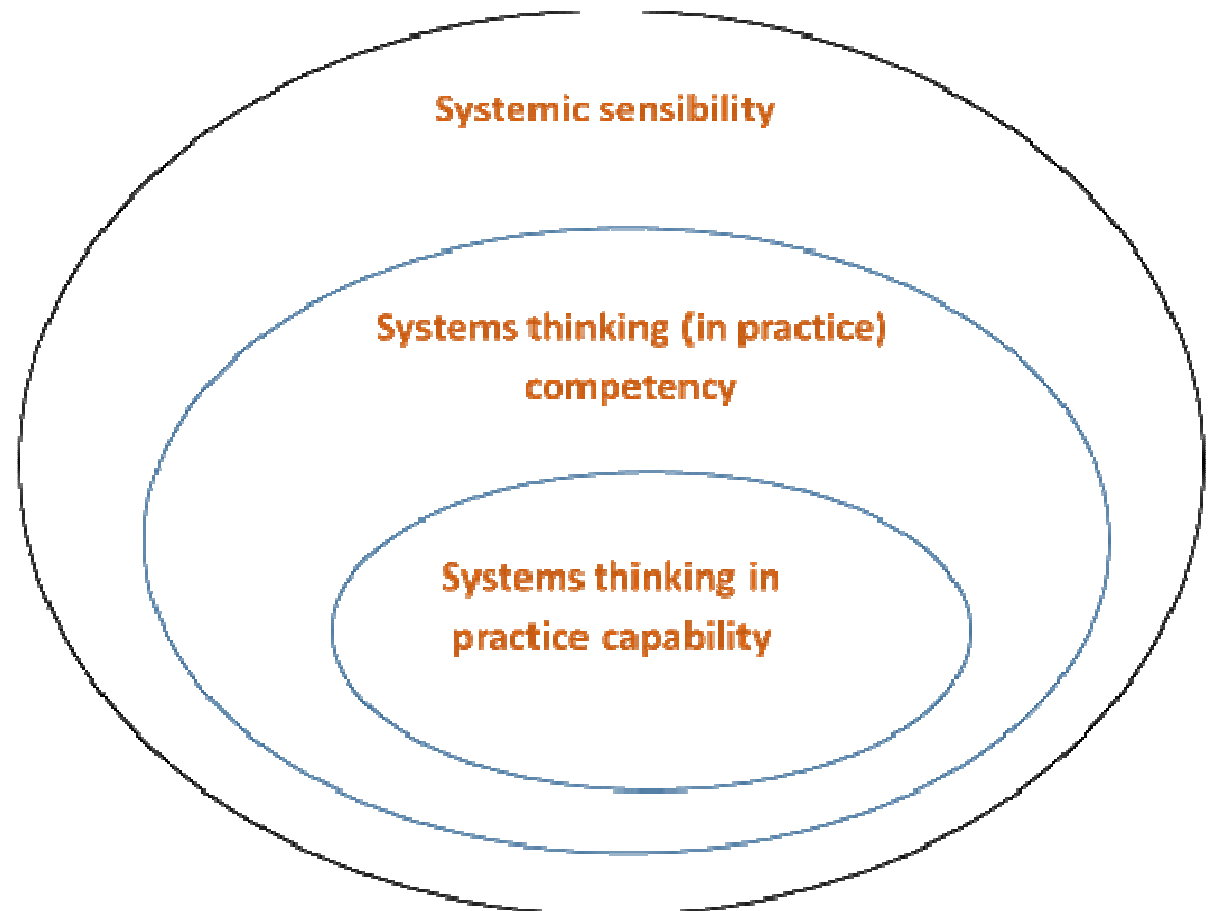
(adapted from) Ison, R. and Shelley, M., (2016). Governing in the Anthropocene: Contributions from Systems Thinking in Practice? Systems Research and Behavioral Science, 33(5), pp.589-594.

Systemic sensibility

Systems thinking (in practice) competency

Systems thinking in practice capability

From 'competencies' to 'capabilities'

2-year eSTEeM action research inquiry

Three significant challenges in Higher Education that hinder systems thinking

1. entrenchment of existing disciplinary boundaries

2. pedagogic traditions that fail to engage learners' existing work experiences

3. institutional assessment strategies based on summative as against more formative or developmental evaluation

Some core capability challenges with STiP

1. 'Transdisciplinarity' developing praxis support

2. 'Silent practice' cultivating harmonious adaptive practices

3. 'Experimentation' enabling safe-fail spaces

Developing effective learning laboratories for capability enhancement

Two action research co-inquiry endeavours …2017

1. Nurturing a 'learning laboratory' on a STiP competency framework for better external recognition and legitimacy of skills needed for integrated/ harmonious interventions… (eSTEeM - 2 inquiry)

   – *Phase 1: capturing insights from key Systems practitioners*

   – *Phase 2: engaging perspectives exploring systemic desirabilities and cultural feasibility of STiP competency framework (online virtual conference sessions)*

   – *Phase 3: workshop support (f2f) in modelling STiP framework*

2. Developing a 'learning laboratory' specific for supporting practitioners involved with implementation of SDGs. Research work with UNDP…

Learning laboratory-2
Supporting capabilities for SDG implementation (SDG 17)

- OU tradition: **Third Mission** (teaching + research +) work of The Open University as HE provider… 'outreach'/ social and community development

- ASTiP tradition: academics working with practitioners in supporting health care, environmental management, local communities, indigenous community groups etc. in co-inquiry endeavours

- ASTiP 'Learning labs' provide interactive space, support (tools, methods, concepts, experiences), and facilitation in (re) framing public policy issues and devising action strategies for research, education, and decision making.

OU resources: Open Media Unit

1. FutureLearn MOOCs (massive open online courses): platforms for social learning (OU-lead consortium)
2. OpenLearn Create (Works) platform for designing interactive learning

17 PARTNERSHIPS FOR THE GOALS

UNDP and OU partnership

1. Meeting the challenge of SDG 17
2. Drawing on experience of systems thinking in practice and development policy and practice (DPP) practitioners

UNDP – OU MOOC-Plus initiative

Two components

1. MOOC - core: 4 week course (12 hours total) based on core principles of STiP competences

2.MOOC – wrap around: series of additional bespoke (closed) learning spaces enabling specific engagement amongst stakeholders
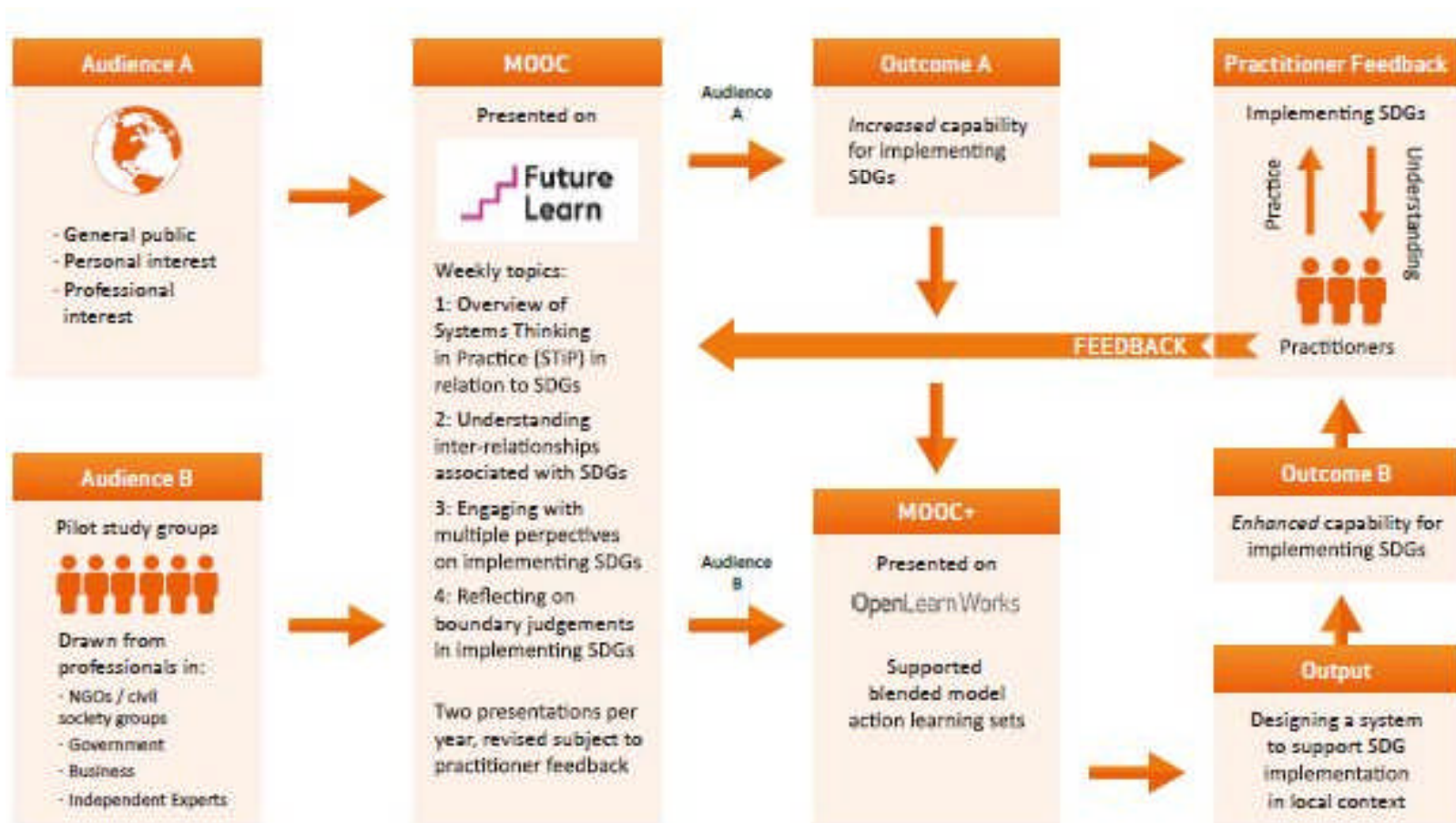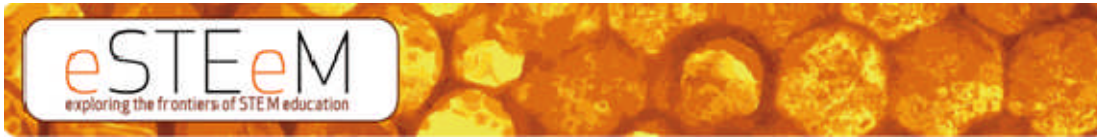
Learning laboratories with UNDP support

Systems thinking laboratory for SDG implementation

**Two components
MOOC –Plus.**

1. MOOC - core: 4 week course (12 hours total) based on core principles of STiP competences

2. MOOC – wrap around: series of additional bespoke (closed) learning spaces enabling specific engagement amongst stakeholders

Challenges

- Provide a safe-fail environment: move beyond supporting competencies to supporting capabilities

- Secure involvement of ALs and their own institutional contexts

- Secure involvement of OU alumni (as advisors/mentors)

- Secure involvement of employer-partners

- Reconfigure PG course production and provision (changing role of educators as gatekeepers to facilitators and co-learners)

- Change marketing ethos from supply-driven (inside-out) to demand-pull (outside-in)

- Question current 'programme-led' ethos of OU; build on 3rd mission uniqueness