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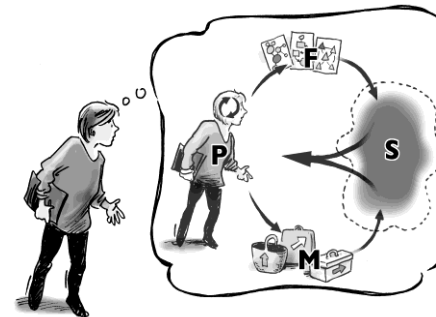## Researching capability development: developing systems thinking in practice capabilities

Conference or Workshop Item

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Researching capability development
Developing systems thinking in practice capabilities

Martin Reynolds and Rupesh Shah
Applied Systems Thinking in Practice (ASTiP) Group
The Open University, UK

P = practitioner
F = framework of ideas/theory
S = situation
M = method or methodology

Panel presentation for one day symposium on:

Governing complexity: developing appropriate praxis with citizens and organisations

Symposium Tuesday 12th June 2018
The Open University, Walton Hall Campus
Jointly organised by C&G strategic research area and
Applied Systems Thinking in Practice (ASTiP) Group

C&G CITIZENSHIP & GOVERNANCE
RESEARCH AT THE OPEN UNIVERSITY

The Open University

Overview of action research:
Three developmental projects

Overiding research aim: to improve higher education postgraduate provision for enhancing social and ecological wellbeing. (…drawing on legacy of OU mission for promoting social justice)

…using the Open University PG programme - systems thinking in practice (STiP) – as case study

- Project 1 (2014-2016_18 months)

    Enhancing systems thinking in practice in the workplace

- Project 2 (2016-2017_12 months)

    Designing professional recognition for systems thinking in practice

- Project 3 (2018-2019_18 months)

     Transforming postgraduate pedagogic praxis and workplace capabilities

Research team: Reynolds/ Shah/ Ison with other members of Applied Systems Thinking in Practice (ASTiP) group including Central academics, Associate Lecturers and STiP alumni

Funding support: eSTEeM - Open University Centre for STEM pedagogy

Research inquiry: systemic action research based on understanding inter-relationships, engaging with perspectives, and reflective action (reflecting on boundaries…reflexivity)

Project 1 (2014-2016_18 months)
## Enhancing systems thinking in practice in the workplace

4 phases of systemic inquiry
January 2015 to August 2016 (c.18 months)

Reynolds, Martin; Shah, Rupesh; Wedlock, Elaine; Ison, Ray and Blackmore, Christine (2016). *Enhancing Systems Thinking in Practice at the Workplace: eSTEeM final report.* The OU Centre for STEM Pedagogy.

- Phase 1: Understanding existing PG work situation of *students* (x10 interviews and x1 group follow-up video-conference meeting, x7 interviews with *ALs*)

- Phase 2: Engaging STiP *alumni* with *employer* partners; feeding back on phase 1 (c.x16 interviews)

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

- Phase 4: Dissemination
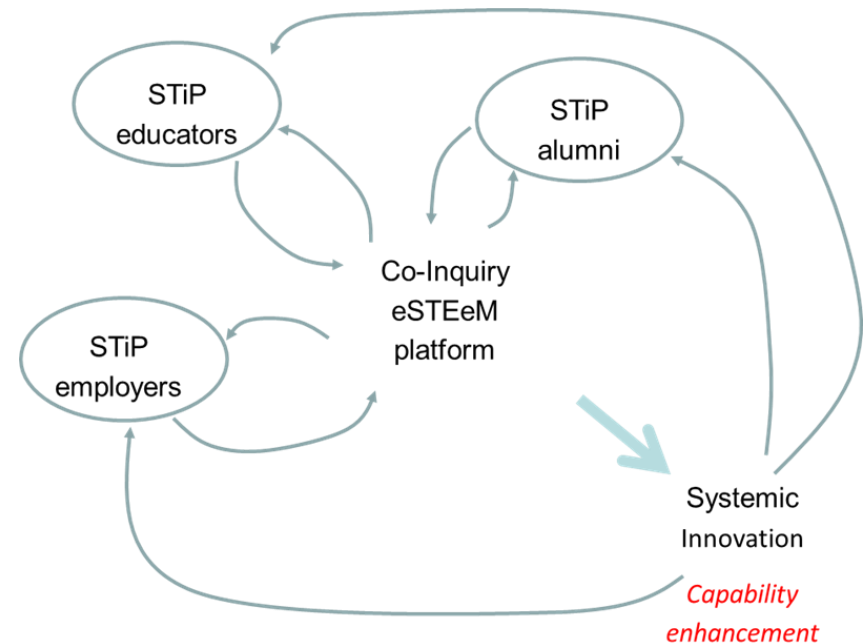
Project 1: phase 1 outcomes

Experiences of postgraduate part-time study of STiP modules

(Core STiP modules: TU811 and TU812)

Key 'enablers'

- Chance to experiment in workplace situation
- Richness of voices and sharing experiences
- Resonance of (systems) ideas with work experiences
- Legitimacy of own views being expressed

Key 'barriers' (in addition to usual study-work balance)

- Changes in work circumstances whilst studying
- Forum discussions can be intimidating
- PG language: abstract nature of subject matter
- Case study: specific to students reinforcing solitude

x5 archetypes from STiP cohorts

- 'Teach me tell me' - limited authority in workplace

- 'MBA-ready' - newish to systems thinking but having responsibilities

- 'Geoffrey Vickers lite' – senior business with views on systems thinking

- 'Get diploma and make hay' – worldly experienced though new to systems thinking

- 'Naked systems thinkers' – already appreciating inter-relationships and multiple perspectives

Project 1: phase 2 outcomes

Experiences of workplace application of STiP

Themes arising: dealing with the workplace

- (restrictive) Pre-defined job specifications
- (oppressive) Power dynamics …covert systems thinking
- BAU (business as usual) pressures on resources (time etc.)
- Organisational silos
- ….

Themes arising: dealing with the study experience

- Confronting misplaced expectations – technical fixing of 'systems' or extravagant 'leadership' roles
- Shifting from individual understandings (aha! moments) to co-worker practical engagement with work colleagues on issues
- Dealing with sense of 'hypocrisy' – not being able or confident to 'walk the talk'
- Practising autonomy in workplace
- ….

Possible relational archetypes between employer and STiP-er

- 'mother-child'
- 'autonomy supporting'
- 'mutual empowering'
- 'co-learning'
- …

Project 1: phase 3 outcomes

Insights and recommendations from 2016 London workshop

- 'Under the radar' practice of systems thinking practitioners: address context of STiP learners …co-design **learning system with employers and alumni**

- explore opportunities for facilitating cross-work STiP peer **conversations** (beyond STiP alumni group)

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

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

- STiP practices need external 'value' and 'validation': develop professional recognition of STiP through a **competency framework**

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

eSTEeM project 2: 'Competency' **in relation to** 'capacity' **and** 'capability'?
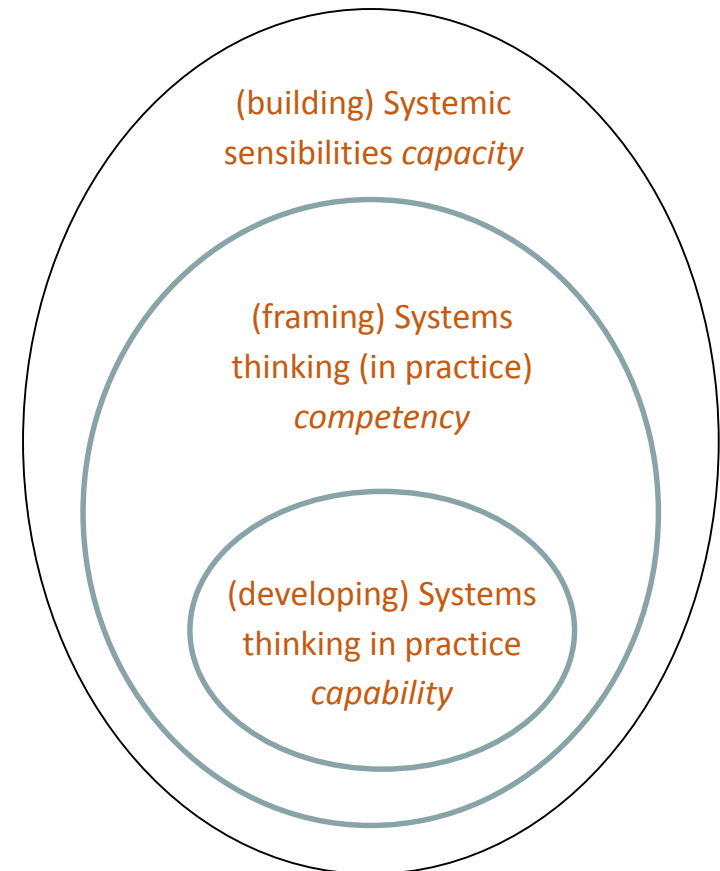
Project 2 (2016-2017_12 months)

Designing professional recognition for systems thinking in practice

Reynolds, Martin; Shah, Rupesh and van Ameijde, Jitse (2017). *Framing systems thinking in practice competencies: report on systems thinking in practice competencies workshop 10 June 2017.* The Open University.

Aim: develop a STiP competency framework for better external recognition and legitimacy of skills needed for developing capabilities in workplace

- Phase 1: capturing insights on 'competencies' 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 (London, June 2017)

- Phase 4: dissemination

(building) Systemic sensibilities *capacity*

(framing) Systems thinking (in practice) *competency*

(developing) Systems thinking in practice *capability*

Adapted from Ison & Shelley, 2016 Fig. 1 p.589

Project 2: outcomes phases 1 and 2
Systems thinking (in practice) competency

Phase 1: capturing insights on 'competencies' from key Systems practitioners

- Widespread activity in developing systems thinking competencies from formal to less formal professional groups
- Beginnings of an online repository of systems thinking competency framings presented as an interim report from Phase 1 – Shah and Reynolds (2017). *Developing professional recognition of systems thinking in practice: an interim report.* The Open University.

Phase 2: engaging perspectives on systems thinking competency framing

- Tension between STiP praxis and design of single bounded framing of competencies
- Limited enthusiasm and resources for online virtual conference sessions… limited resources channelled for f2f workshop instead

Project 2: outcomes phase 3 workshop
Systems thinking (in practice) competency

Phase 3: workshop support in modelling STiP framework (London: 10/06/2017)

X14 invited participants principally from ST related professional bodies/ NGOs ; X3 ST 'frameworks' discussed: (a) Forum for the Future; (b) SCiO (Systems and Cybernetics in Organisations); (c) INCOSE (International Council on Systems Engineering) and compared

- **Perceived benefits of STiP framing**: generating demand for STiP development; recognition of STiP as a valuable skillset; support for the development of STiP skills; enabling structure for the provision of learning and development in STiP; fostering organisational receptiveness to STiP by making skills more 'visible'; recognising the importance of intervention and application skills (key element of practitioner capability); means to validate STiP practice; guard against proliferation of some misguided espoused systems practice which damages reputation of STiP as a skillset

- **Tensions**: Systematic Vs systemic framing; comprehensiveness Vs usability; plurality of methods Vs proficiency of use; Regulatory Vs developmental; Foregrounding Vs backgrounding systems practice.

- **Design turn:** 'A system to support ongoing engagement with and managing the development of Systems Thinking in Practice (STiP) competencies and capabilitiesh' was modelled through three groups focused on exploring design issues: (i) viable systems model (VSM) perspective; (ii) critical systems heuristics (CSH) perspective; and (iii) system dynamics/multiple cause diagramming (MCD) perspective.

- **Role of employers?** Backdrop of UK L7 apprenticeships and OECD publication of systems thinking in public sector…

Reynolds, Shah, and van Ameijde (2017). *Framing systems thinking in practice competencies: report on systems thinking in practice competencies workshop 10 June 2017.* The Open University

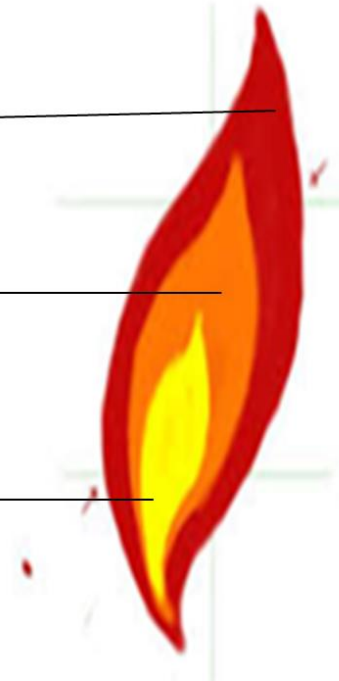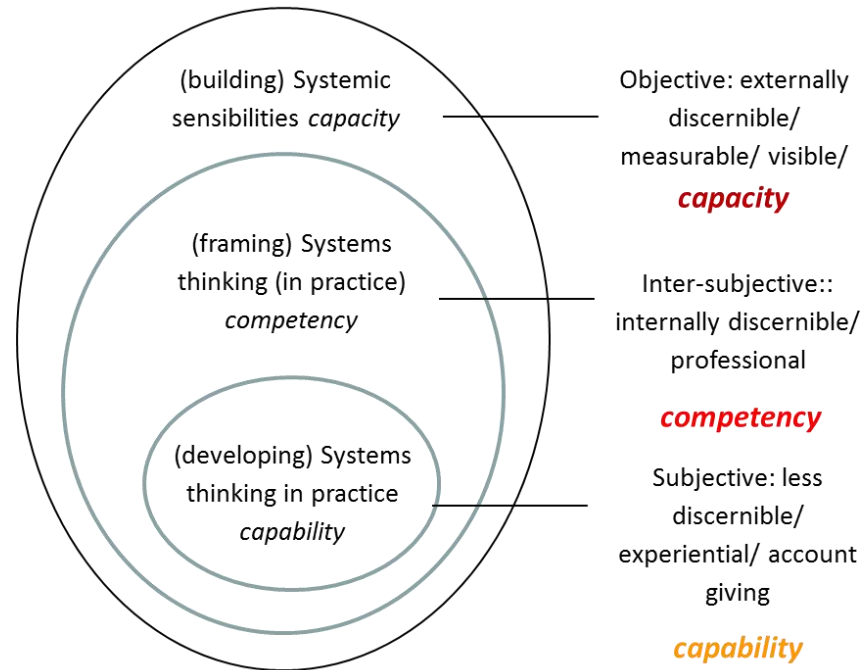**Three challenges in Higher Education**

1. entrenchment of existing disciplinary boundaries

2. Pedagogic failure to engage learners' existing work experiences

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

Three core capability challenges with STiP

1. 'Transdisciplinarity' developing praxis support

2. 'Silent practice' cultivating harmonious adaptive practices…active pedagogy

3. 'Experimentation' enabling safe-fail spaces

(building) Systemic sensibilities *capacity*

(framing) Systems thinking (in practice) *competency*

(developing) Systems thinking in practice *capability*

Objective: externally discernible/ measurable/ visible/ ***capacity***

Inter-subjective:: internally discernible/ professional ***competency***

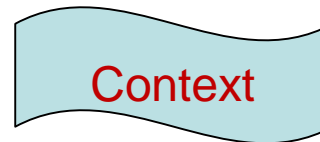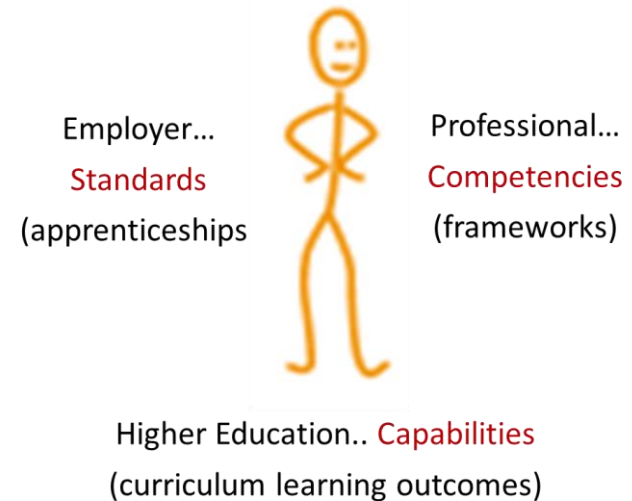Subjective: less discernible/ experiential/ account giving ***capability***
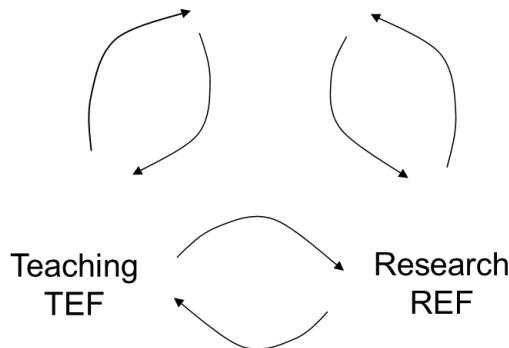
Project 3 (2018-2019_18 months)

Transforming postgraduate pedagogic praxis and workplace capabilities

- **International:** OECD/ OPSI report (2017) ST in public sector + increasing interest in systems thinking for managing complexity …

- **International:** Higher Education - Quality Assurance - European Bologna Process (1999) UNESCO..

Employer…
Standards
(apprenticeships

Professional…
Competencies
(frameworks)

Context

Higher Education.. Capabilities
(curriculum learning outcomes)

Third Mission..
Capacity Building?

Teaching TEF

Research REF

- **National UK**: HE sector; pushback against fees, students as 'consumers VfM, OfS, TEF (competitive 'medals' etc…)…

- **National UK**: Apprenticeships L7, TbC, new coding for disciplines (HECoS 100743 = ST)…

- **OU:** pushback against SFTP, VC vote of no confidence, REF & scholarship, general corporate style of governance…

Project 3 Aim and objectives

Changing the way the game is played

Aim: (Capabilities approach) shifting from developing 'competencies' based on learning outcomes (playing 'the game' better) towards enhancing 'capabilities' - creating innovative space for redefining occupational, professional, and social roles and practices amongst stakeholders in the workplace (changing the way 'the game' is played)?

1. Explore systemic **governance issues** of curriculum design and implementation in relation to supporting part-time postgraduate study for enhancing workplace capabilities

2. Develop a learning system associated with progressing a **new Trailblazer Level 7 apprenticeship standard** involving multiple stakeholders including employers and professional bodies as well as other HEI providers

3. Leverage experiences of the L7 apprenticeship for **postgraduate curriculum design and implementation**

"**The principles are the same. It is not about being the best at playing the game or cooking the best meal, but more about changing the way the game is played and how the food is served and perceived**

…while having fun in the process"

(Sports journalist, Guillem Balague, 16th April 2018. BBC, commenting on Manchester City Manager, Pep Guardiola and friend and creative Chef, culinary expert, and owner of El Balli Restaurant in Barcelona, Ferran Adria)