Design Principles for Impact-Driven Policy Education



Collaborative Knowledge Sharing

➤ Experiential & Reflexive Learning

Real-World Exposure & Problem Solving

Policy Impact Assessment through Immersic

Creative Policy Exploration

Embedding Politics in Design Thinkin

Application of Theory to Practice

Multi-Stakeholder Analysis

Co-Creation of Knowledge

ntegrating Practical & Conceptual Learning

Experiential Policy Decision-Making

Scenario-Based Learning for Policy Testing

10. Concept map (Pedagogy)

Design Studios

Case-Based Learnin

Classroom as Policy Lab

Policy Simulation

Systems Thinking

PEDAGOGY

Learning Community Themes

Chua Thian Poh Ridge View Residential College Community Leadership Centre College of Design and Engineering

Workshop 8: Heterogeneous group assignments foster collaboration across disciplines and hierarchical backgrounds

Workshop 3: Peer mentoring in policy courses ensures continuity in learning and knowledge transfer

Workshop 8: Students engage in reflexive discussions to challenge assumptions and refine policy approaches

Workshop 5: Collaborative group projects encourage knowledge co-creation in community development studies

Workshop 3: Fieldwork allows students to directly engage with local communities and policy stakeholders.

Workshop 4: Engagement with communities through field trips enhances policy relevance and application

Workshop 6: Students use field data to refine systems models and policy interventions.

Workshop 9: The iterative design process helps students develop multi-layered policy interventions

Workshop 6: Policy issues are embedded in urban design studies, helping students contextualize socio-political dimensions of planning.

Workshop 1: Students analyze real-world case studies to understand governance complexities and stakeholder interactions.

Workshop 2: Comparing policy cases across different contexts enables students to develop critical thinking skills.

Workshop 1: Case studies on water governance demonstrate the role of competing stakeholder interests in policy decisions

Workshop 9: Challenges in disaster management policies are analyzed through historical case-based learning.

Workshop 8: Policy labs facilitate interdisciplinary discussions, allowing participants to refine public policy concepts through practice.

Workshop 9: The classroom serves as a testbed for policy experimentation, linking theory with real-world applications

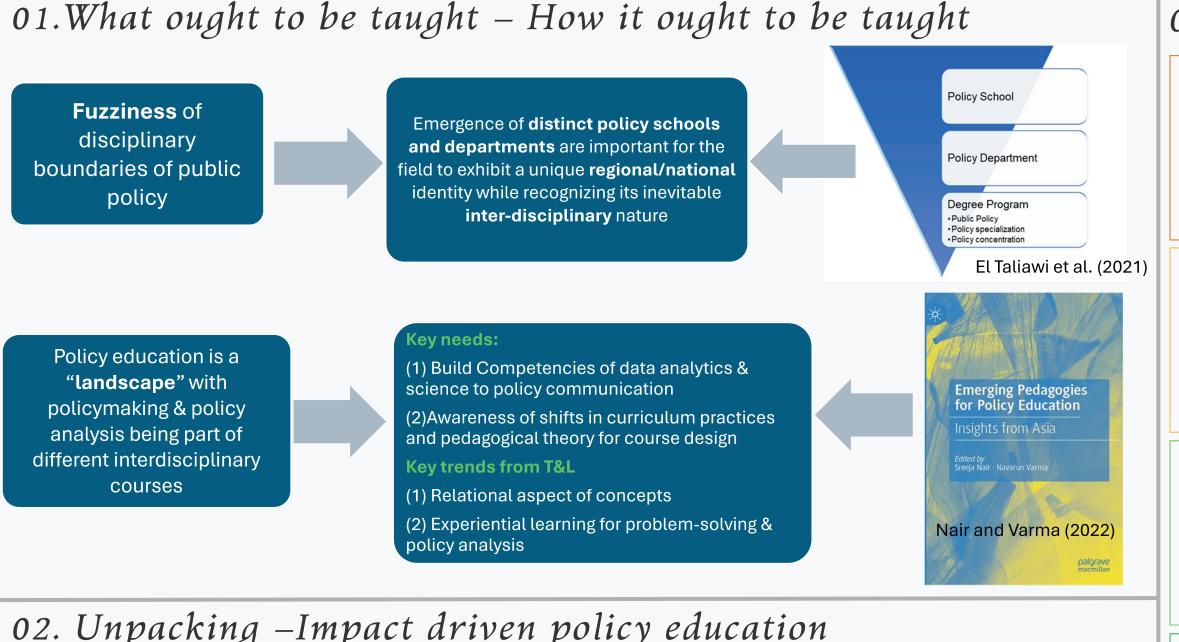
→ Workshop 7: Classroom simulations enhance students' ability to formulate evidence-based policy decisions

Workshop 7: Students act as policymakers to assess macroeconomic challenges and propose policy solutions.

Workshop 1: Role-playing exercises help students experience governance complexities and stakeholder negotiations

Workshop 2: Interactive policy simulations enhance learning outcomes by integrating multiple perspectives into decision-making

Workshop 3: Fieldwork allows students to directly engage with local communities and policy stakeholders.



02. Unpacking –Impact driven policy education

Education for sustainable development

- pushes the boundaries of learning towards transdisciplinarity
- encourages co-production of knowledge through engaging students with real-world problem situations and wisdom of stakeholders

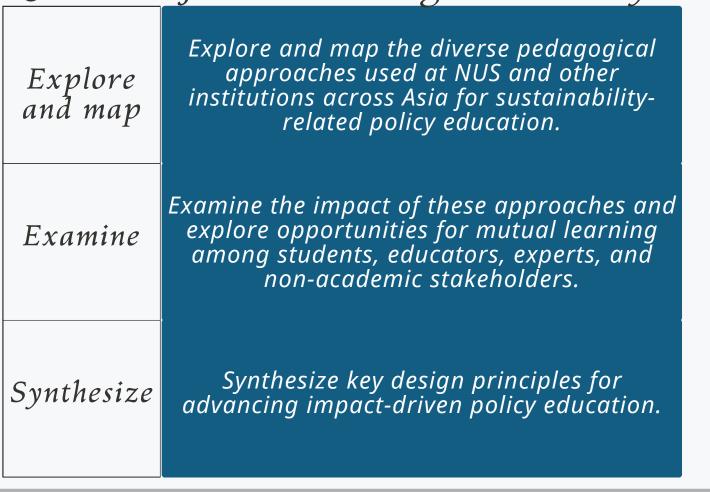
Focuses on competencies for-

- 1. Imagination for transformative changes
- 2. Systems thinking to understand the interdependencies of human-environmental health
- 3. **Emotional intelligence** to act and cope with crisis

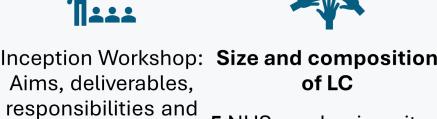
Familiar repertoire of pedagogies: Fieldwork, Service to Simulation-based learning methods. Dilemmas -

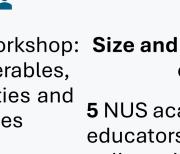
- 1. The static notion of Learning Outcomes amidst the **ambiguity and complexity** of the sustainability concept and the need to create space for emergence from the knowledge co-production process
- 2. Facilitating **collaboration** amidst a structure of competitive student evaluation.
- 3. Moving beyond students' learning, creating opportunities for **mutual learning** among stakeholders, and social impact

03. Aims of Our Learning Community



04. The Process



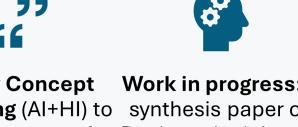


5 NUS academic units, **7** their own experience educators teaching policy-oriented courses, participation from **1** CTLT senior staff member (Dr. Kiruthika Raghupati), **2** NUS Alumni with roles in the social impact sector, 1 Year 2 Student Assistant

(Computing Student)



Workshops: LC **impact narrative** from and lead a brainstorming session workshop reports. [August 2024-February 2025]



Apply Concept Work in progress: A Mapping (Al+HI) to synthesis paper on make-sense of Design principles for information from impact driven policy literature and 9

05. Outputs



Brainstorming Workshops: Nine workshops conducted, including an external expert (Prof Vishal Narain, MDI, India) exploring sustainability-policy integration. Final synthesis and reflections presented in final workshop [27 March] and a NUS poster session [2 April 2025].



International Conference Panel: LC's panel on "Mainstreaming Sustainability into Policy Education" accepted for the 7th International Conference on Public Policy [2-4 July 2025], with four papers to be presented.



Incubation of future research: Developed a TEG-Research proposal for exploring potential of role-plays in multidisciplinary classrooms of policy-oriented courses at NUS and ideas on reflection pieces on continuous feedback.

06. Thematic Analysis

Broad Themes	Session Topics	Insights on policy education
System Thinking and Complexity Science SREEJA, NAVARUN, BERNISE	Integrating socio-political cultural dimensions for the context of urban lake management	Introduction of multi-level governance and ambiguity around natural resource management in Global South through
	Challenge based learning framework	Participatory Systems Modeling as a boundary object for co-creation of knowledge among students, educators and community leaders
	Systems Thinking for wicked problems	Problem articulation through community engagement and solving with complexity science tools
Space and design VICTORIA & NIKI	Purposeful place making for active living and resilience	Community as a classroom
	Integration of political ecology theory and cost-benefit thinking into design studios	Design studios for imagining nature-society relations vis-à-vis policymaking
Community resilience and development KEVIN & ASHIK	Empowering individuals and enable social change through interaction and social support	Awareness of community development frameworks and competencies for community-based action/solutions
	Exploring community preparedness to disaster and its interdependence with politics, empowerment for local response, and institutions	Multiple streams framework for exploring policy-practice nexus
Disciplinary rigor vis-à-vis accessibility SASIDARAN & VISHAL NARAIN	Making macro-economics accessible to public policy students	Active learning tools with continuous feedback process
	Making theories from New Institutional Economics accessible to civil servants	Classroom as a policy lab

07. AI-assisted concept mapping

AI-Assisted Transcribe workshop discussions using AI, then Transcript & validate with speakers to ensure accuracy. Validation AI-Based Use ChatGPT to generate concept maps based mapping with on Learning Community aims (proposal) and Structured workshop questions (shared with members during Inception workshop to structure Prompts narratives). Hierarchical Organize concepts into four levels, refining themes with insights from Thematic Structuring workshop reports. Consolidate themes into three key Final Thematic areas: Content, Pedagogy, and Categorization Competency, for synthesis and reporting.

08. Levels of concept map

-Sustainability related policy education -Evidence of impact of pedagogies -Design principles for impact-driven policy education	11. Concept map (Competency) Analytical Skills for Policy Evaluation
Linkage of impact-narratives shared with: -Policymaking/ Policy analysis/Policy education -Sustainability education	Operational Skills in Policy Implementation Policy Capacity Building Political Skills & Stakeholder Navigation
Content: Multilevel Governance, Ambiguity (Wicked problem), Public consultation, sectoral knowledge, Long term impacts (sustainability), Interventions for shocks (resilience), Macroeconomics, Policy learning, Political ecology for space design Pedagogy: Peer learning, Fieldwork & Community engagement, Design studio, Casebased learning, Classrooms as policy lab, Policy simulation, Continuous feedback Competency: Policy Capacity Building (analytical/political/operational skills to refine policymaking, Systems Thinking (across frames and disciplines), Co-creation of knowledge to refine policymaking)	Learning Community Themes Systems Thinking Transdisciplinary Approaches Understanding Policy Complexity
Work in progress- Experimentation to derive relationships between Pedagogy-Content-Competency through nuances of Level 4	Co-Creation of Knowledge Knowledge Transfer Across Disciplines Experiential Learning for Policy Development
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Learning Community Members



(RC4)



Sreeja Nair

(LKYSPP)





(Alumni &Tinker



Sasidaran Gopalan Corinne Ong Pei Pei Willoughby Niki Lee Muhammad Ashik (Alumni & Mercy

12. Experimentation Progress Workshop 3: Teaching methods need to remain flexible, as policy education should adapt to changing context Adaptive Learning for Complex Issues Resilience Shock Resilience in Rural Policies Institutional Learning & Knowledge Transfe

Transdisciplinary Approaches

Real-World Exposure & Problem Solving

09. Concept map (Content)

(RVRC)

