Teaching and Learning the Embedded Economy

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European Economics Education Conference
Milan, 29th August 2025

Financed by:

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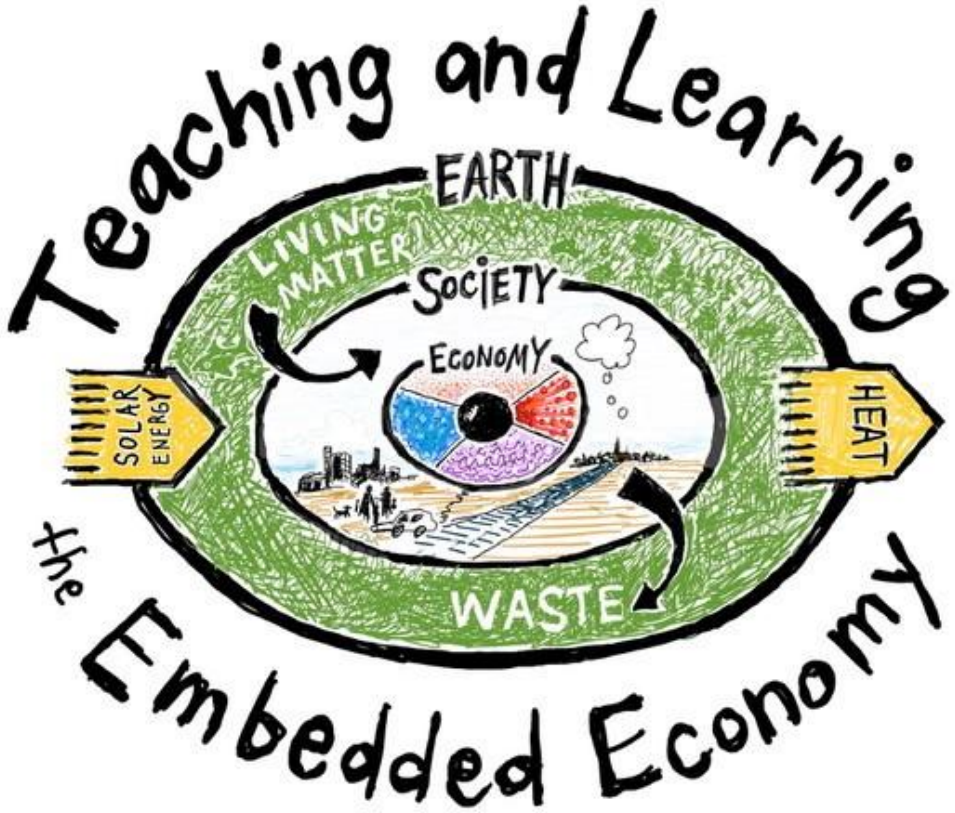
Part I: the TEE project



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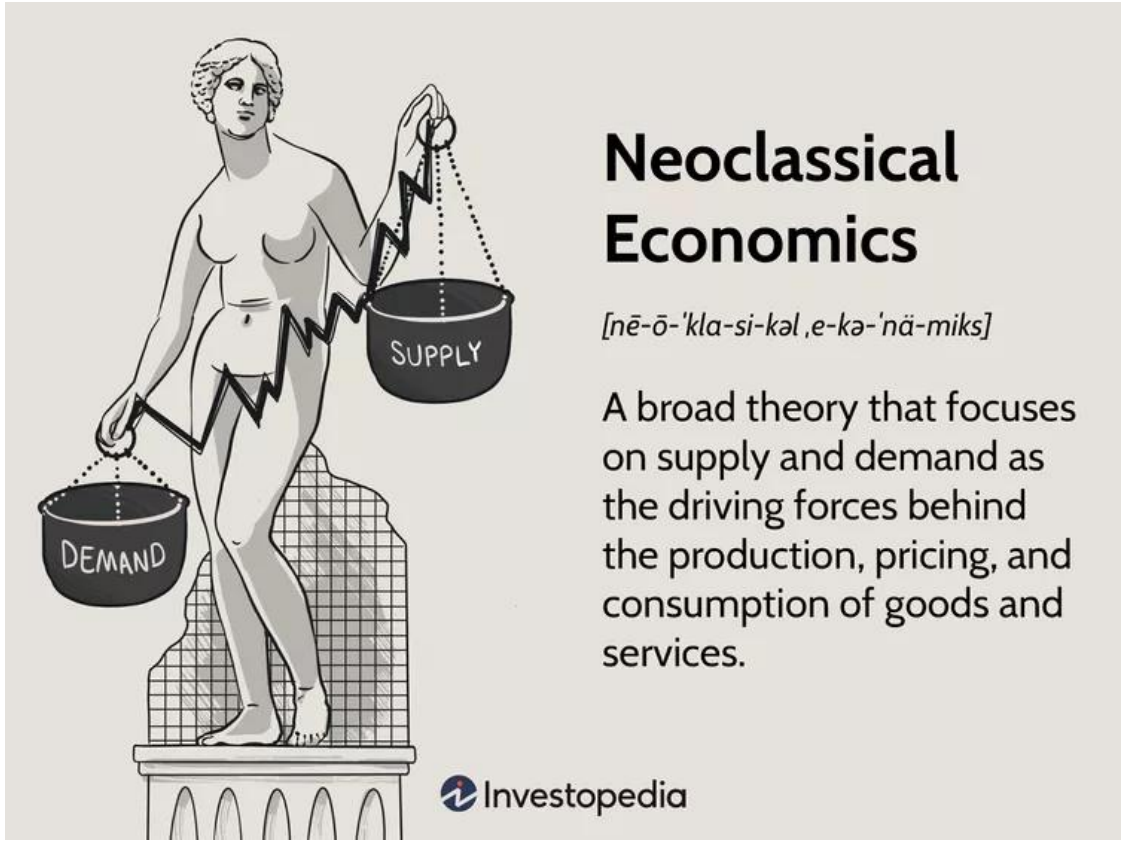
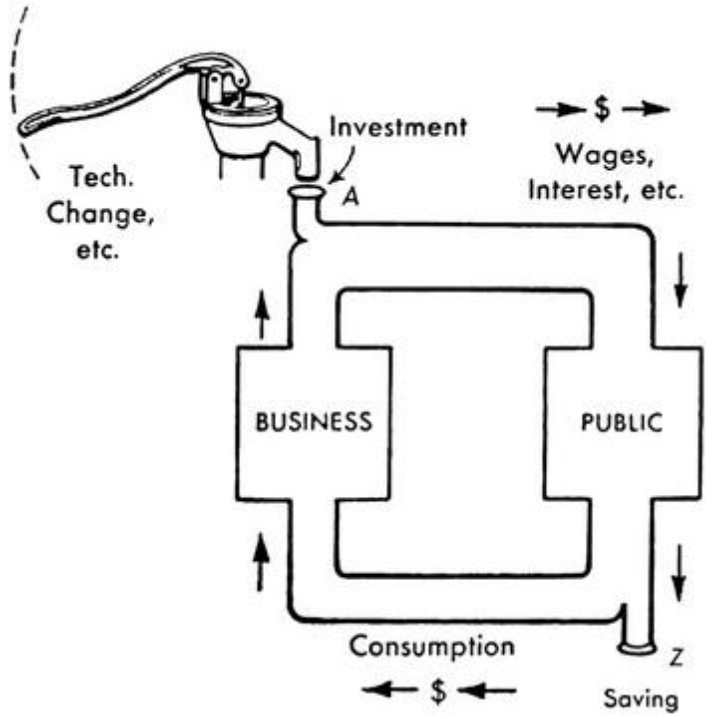
How do most teachers introduce economics?

Dominance of the neoclassical paradigm



Credit: Investopedia / Lara Antal



Circular flow diagram (Samuelson, 1948)

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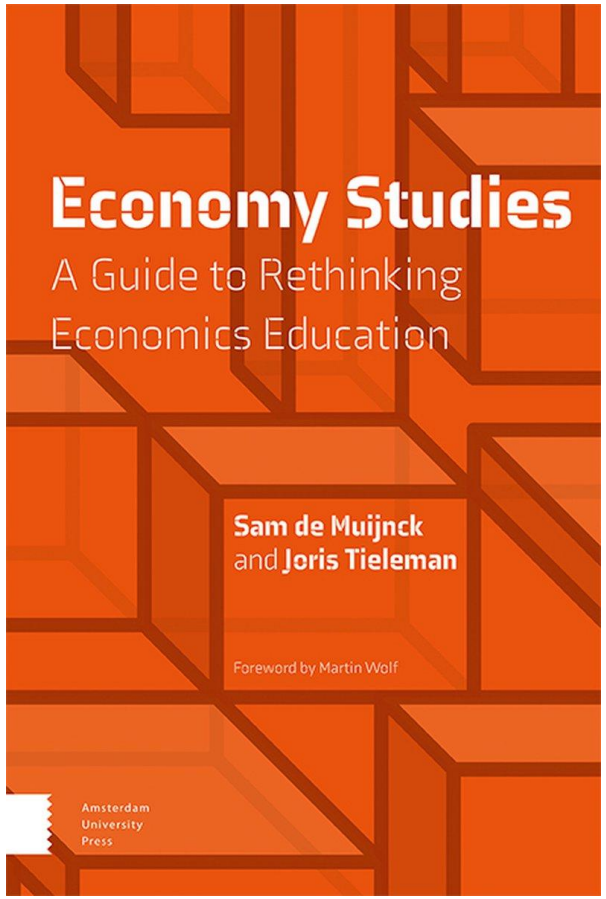
Rethinking economics education (de Muijnck & Tieleman, 2021)



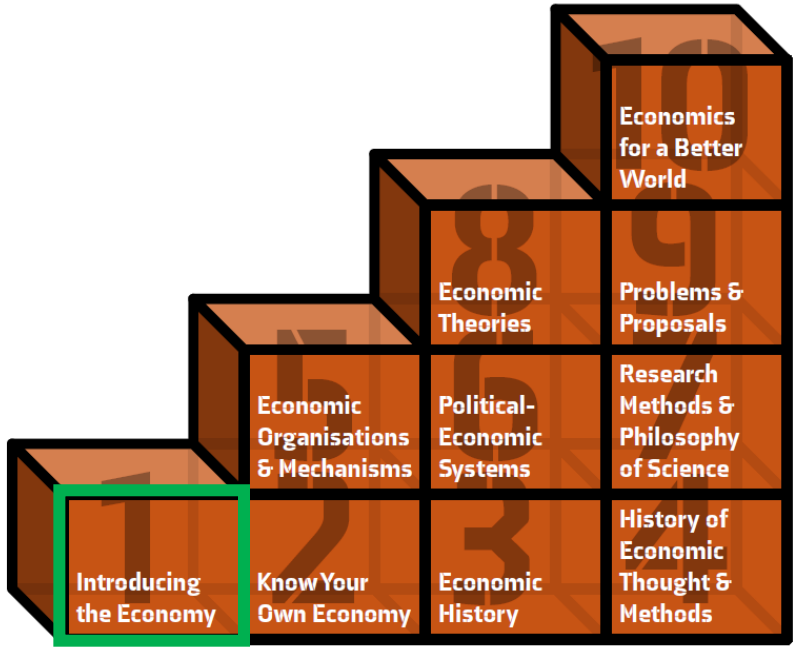


Figure 5: The ten building blocks that form the core of this book. The order of the numbers is not necessarily the order in which they should be taught. Their relative size varies, with building blocks 7 and 8 generally taking up much more space than the others. Programmes may also combine various building blocks into a single course, or split a single building block up over a number of courses. See the chapter Tool 5: Example Curricula *for how this can look in practice.*

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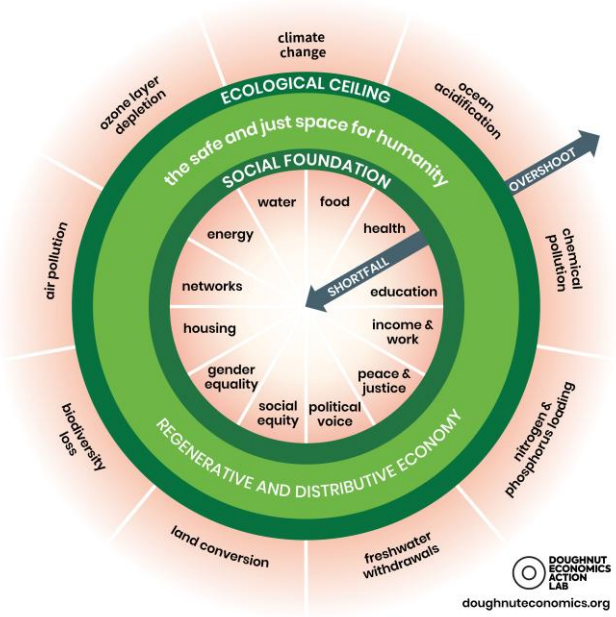
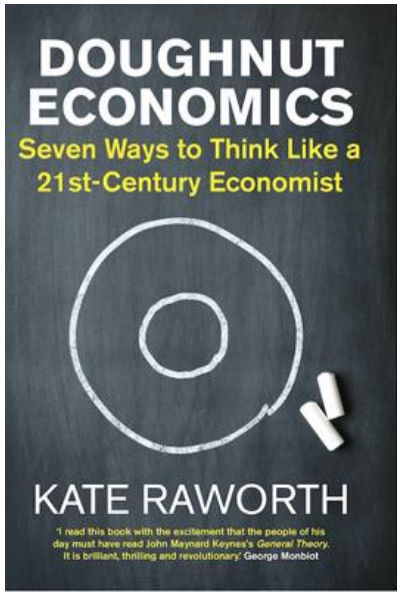
Doughnut economics (Raworth, 2017)





"The citizens of 2050 are being taught an economic mindset that is rooted in the textbooks of 1950, which in turn are based on the theories of 1850."

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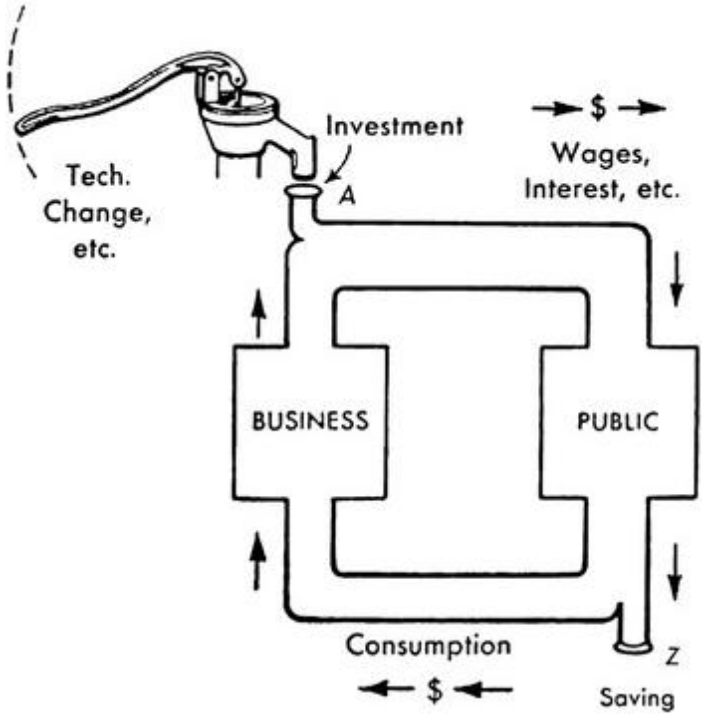
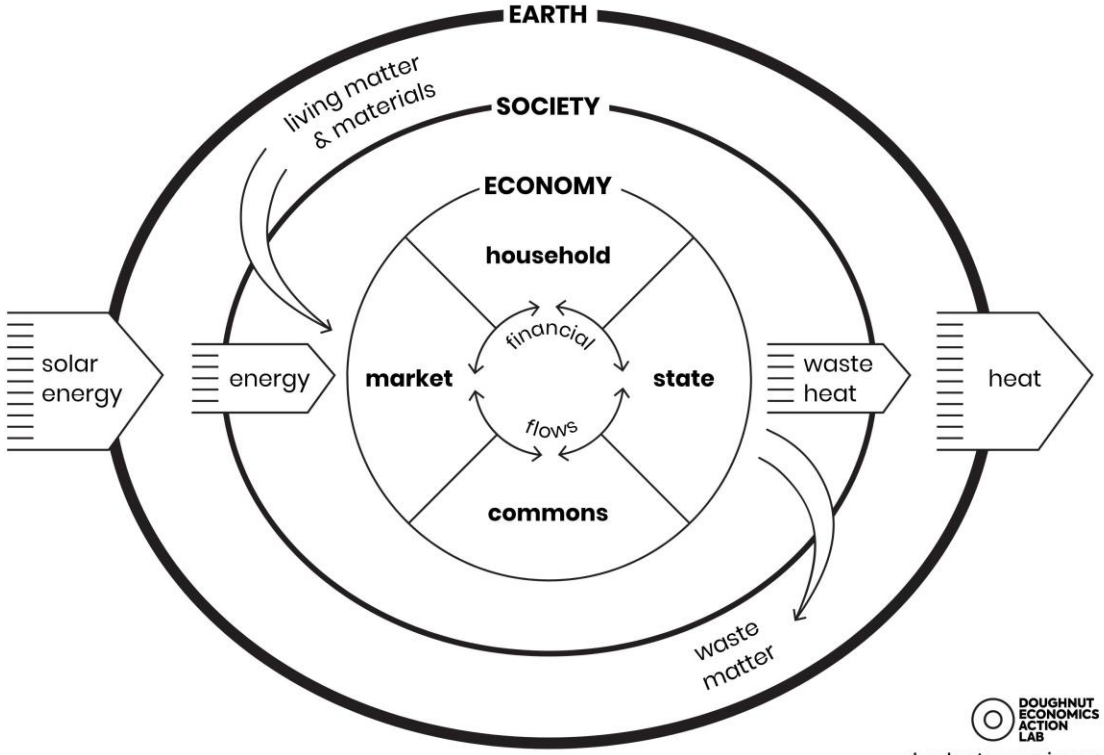
Step 2: look at the bigger picture





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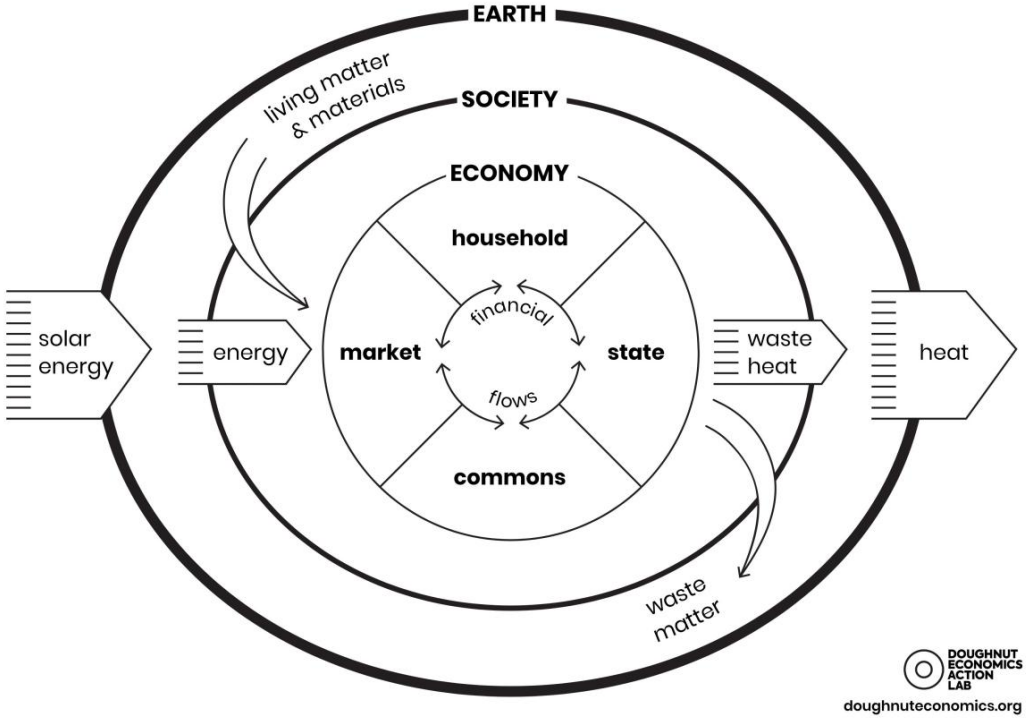
The embedded economy (Raworth, 2017)



Citation: Raworth, K. (2017), Doughnut Economics: seven ways to think like a 21st century economist. London: Penguin Random House.

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The TEE project

Research question

- How can teaching in economics enable students to grasp the complex and dynamic relationships between economic, social and ecological dimensions of sustainability?

Research context

- **T**eaching and learning the **E**mbedded **E**conomy (2024-2027)
- Case studies in Sweden and Belgium (Flanders) – two cycles
- Teachers and pupils in upper secondary education

Research approach

- Contextualise DEAL's lesson series "Meet the economy" on the embedded economy concept
- *Lesson design workshops* with teachers, including reflection after implementation of the lesson series
- Data collection through classroom observations, audio recordings, and student notebooks

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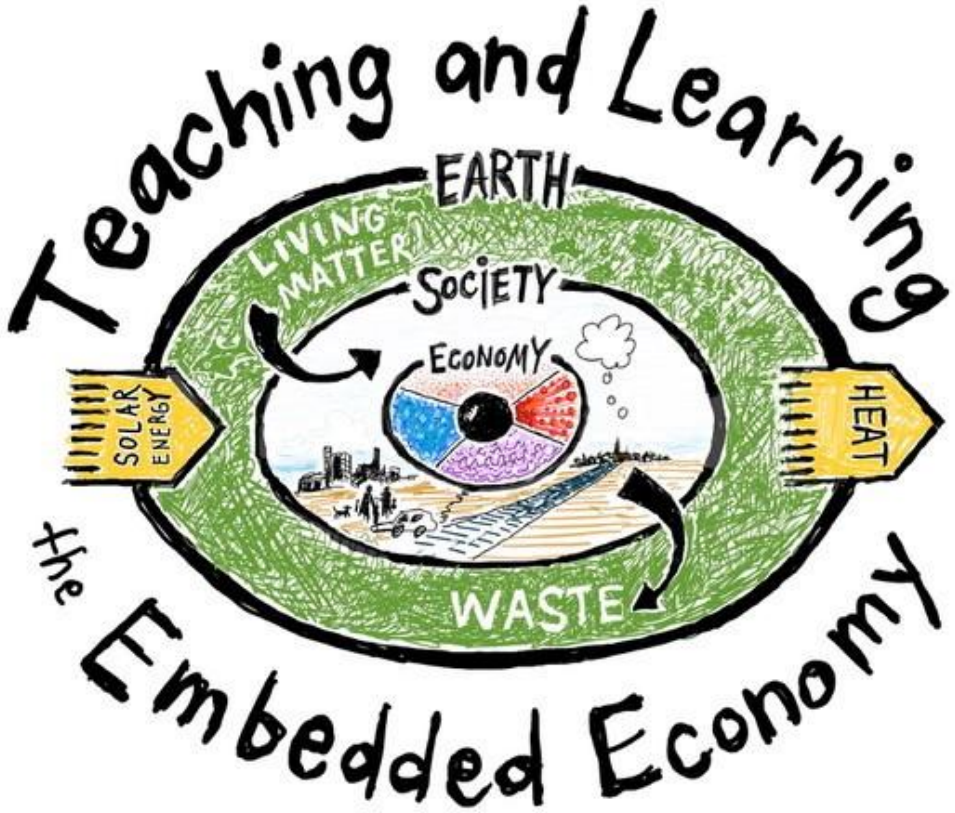
Part II: Lesson design workshop



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Why a lesson design workshop? (Östman et al., 2025)

Goal?

- Improving the quality of education
- Teacher professional development

How?

- Theory-practice bridging: hybridisation of scientific and practical knowledge
- Coproduction between researchers and teachers
- 3 to 5 two-hour meetings with in-between assignments (including reflection)
- Starting from a specific teaching challenge
- Using didactic models

Output?

- Educational products / lessons

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Teaching challenge

How can teaching in economics enable students to grasp
the complex and dynamic relationships
between economic, social and ecological dimensions of sustainability?

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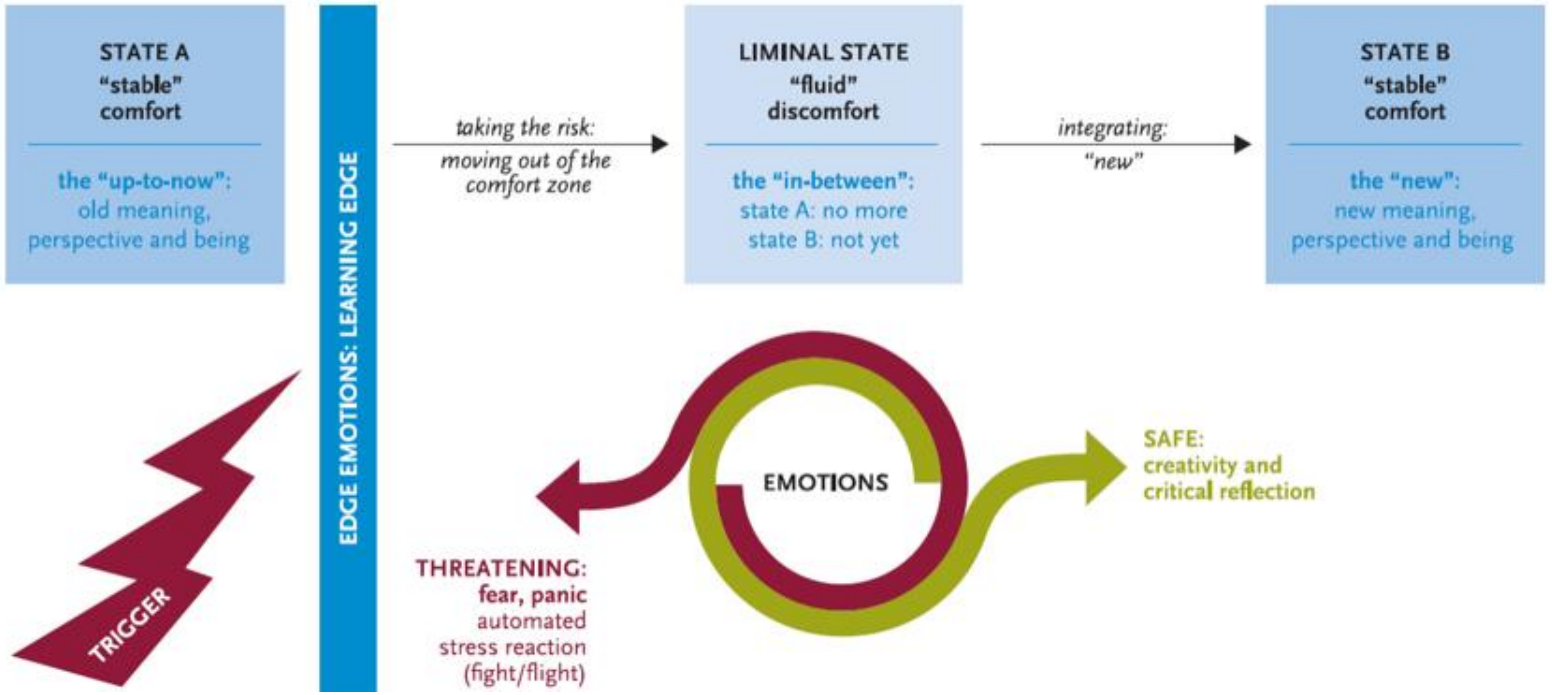
Didactic models: transformative learning



Source: Förster, Zimmermann & Mader (2019) Transformative teaching in Higher Education for Sustainable Development: facing the challenges. *GAIA – Ecological Perspectives for Science and Society*, 28(3), 324-326.

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Didactic models (de Muijnck & Tieleman, 2021)

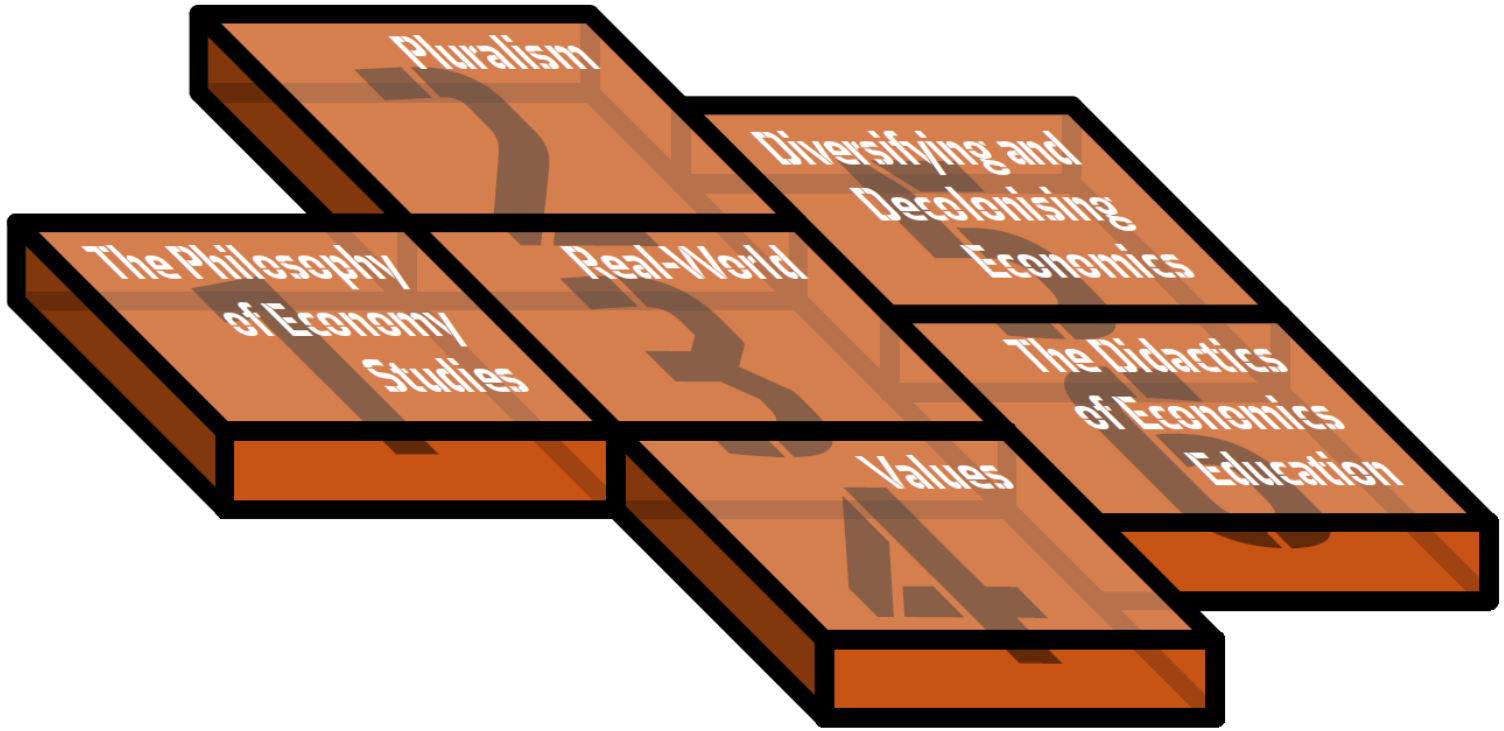

Figure 1: An overview of Part I: Foundations.

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Pre-class assignment

- record all the instances where people or things help you meet your needs and wants over the course of a 24 hour period

- record what the want or need is and who or what is enabling you to meet that need

Boundary object: “Meet the Economy”

Lesson 1. The Embedded Economy		**90 min**
Part 1	Your economy	30 min
Part 2	Meet the Embedded Economy	30 min
Part 3	Mapping your economy	20 min
Part 4	Reflections and close	10 min

Lesson 2. The Household and Commons		**90 min**
Part 1	Introduction	10 min
Part 2	The Household	30 min
Part 3	The Commons	30 min
Part 4	Qualities and caveats	20 min

Lesson 3. The Market and State		**90 min**
Part 1	Introduction	10 min
Part 2	The Market	30 min
Part 3	The State	30 min
Part 4	Qualities and caveats	20 min

Lesson 4. Bringing it all together		**90 min**
Part 1	Introduction	10 min
Part 2	Dynamic interrelations	30 min
Part 3	Creative expression	40 min
Part 4	Reflections and close	10 min

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Examples of “Meet the Economy”

Wants and Needs	Spheres of economic activity			
	The Market	**The State**	**The Household**	**The Commons**
A meal	*Restaurant or home-delivery service*	*School dinners*	*A home-made meal*	*A community picnic*
An email or letter	*An email from an online shop you recently bought something from with their latest offers*	*A letter with guidance for an upcoming election*	*A hand-written letter with personal stories and interest in how you are*	*A community newsletter with news and stories from the neighbourhood*
A music night	*A ticketed event of your favourite band*	*A large free event with has-been bands*	*Singing round the piano or playing guitar round the fire*	*An open-mic night at a local venue*
A sports game	*The Superbowl*	*The Olympics*	*A game in your garden*	*A community-run football game*
Financial advice	*From a financial advisor*	*From the Citizens Advice Bureau*	*From another family member*	*From a wiki platform*
Childcare	*Professional childminder*	*Public nurseries*	*Parenting*	*Baby-sitting circle*
Household maintenance	*Task rabbit (gig economy)*	*Public subsidy for some household work (e.g. insulation)*	*DIY (with tools bought from the market)*	*DIY (with tools borrowed from a community workshop)*

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Examples of “Meet the Economy”

Wants and Needs	Spheres of economic activity			
	The Market	**The State**	**The Household**	**The Commons**
Qualities	*Prices powerfully coordinate private value creation and capture*	*Public investment provides goods and services to meet the needs of all*	*Unpaid care provides essential wellbeing and generates intangible value*	*Principles generate shared value when designed and collectively managed well*
Caveats	*Only serve those who can pay* *Only value what's priced*	*Challenge of efficiency* *Challenge of accountability*	*Unrecognised supports to the paid economy* *Gendered distribution of household work*	*Challenge of scale and coordination* *Challenge of recognition by others*

Assignment

Problem	Solution
Positive aspects	Keep
Negative aspects	Suggestions for change
Not suitable for local context/curriculum	Necessary adjustments to fit local context
Unsure what to do with these elements	Keep, change or delete?
Elements that we can shorten	Suggestions for shortening

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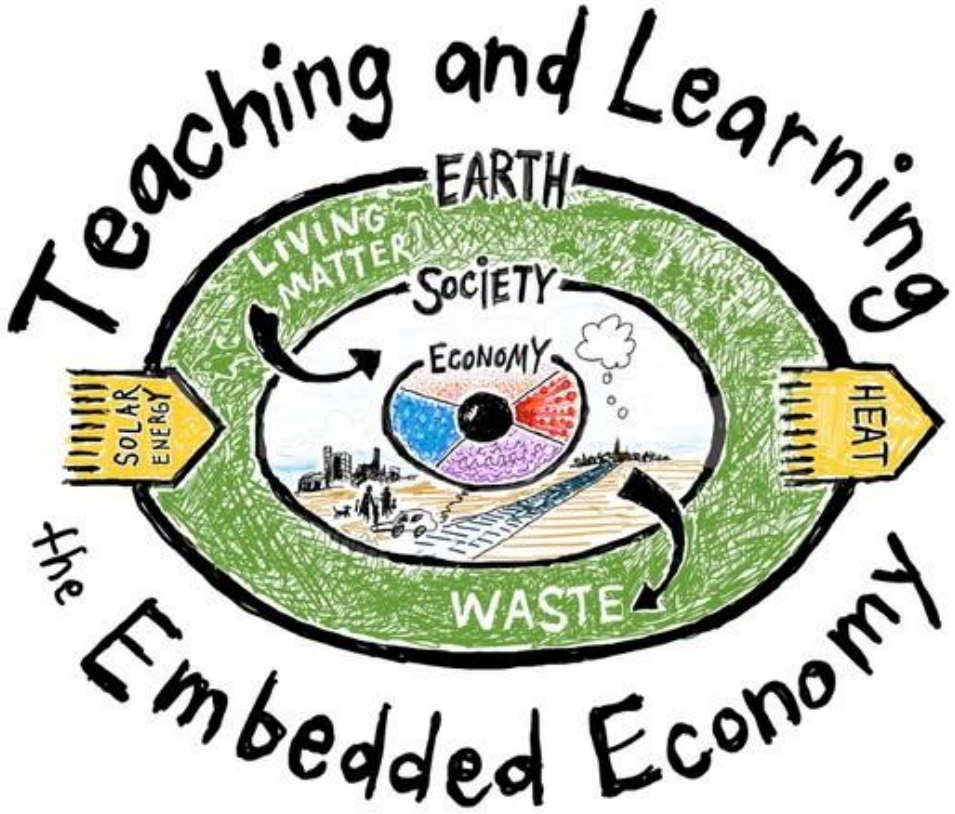
Part III: preliminary results (1st cycle)



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Teachers' modification to the materials

- Teachers use an inductive way to introduce the model, and ask students to not only record their needs and wants and their providers, but also to come up with a classification themselves
  (note: where do we position "God"?)

- To discuss how the means of provision have shifted over time, teachers suggested to ask interview elderly. However, the results focus mainly on discussing technologic advancement.

- Identification of qualities and caveats is time-consuming (and abstract) and has been reduced.

- Teachers struggled with the creative assignment ("my pupils are not creative")
  → suggestion to work with storytelling or a 'Picasso party'

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How did pupils talk about economics before TEE?

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How did pupils talk about economics after TEE?

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General impressions

- Some teachers find it difficult to see that households and the state are part of the economy and to break away from their focus on money flows
  Teacher: Why is the household part of the economy?
  Facilitator: Don't you think that a household adds value?
  Teacher: Oh, yes, I didn't think of it like this

- Most difficulties are experienced with the concepts of 'commons' and 'society'

- When students think of the different spheres, the earth is the dominant perspective because of the supply of raw materials

- How the spheres of activity can best work together for getting into the doughnut is almost never discussed

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Dominance of the neoclassical paradigm

- Neoclassical way of thinking is dominant

- Difference between Flemish and Swedish teachers:
  - Flemish economics teachers have a background in (business) economics
  - Swedish economics teachers have a backgroun in social studies

  → Swedish teachers are less prone to a neoclassical lock-in

- Even teachers with a strong motivation to integrate sustainability in the economics curriculum, have limited knowledge on more pluralistic paradigms (e.g. feminist economics, social ecological economics, …) and heavily rely on (neoclassical) environmental economics

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Dominance of the neoclassical paradigm

Example from teachers' explanations

T: We have indeed overconsumption. We use a lot of raw materials and indeed we run out of them and that is a problem. Uh and society and economy? What do we need from society to start producing?

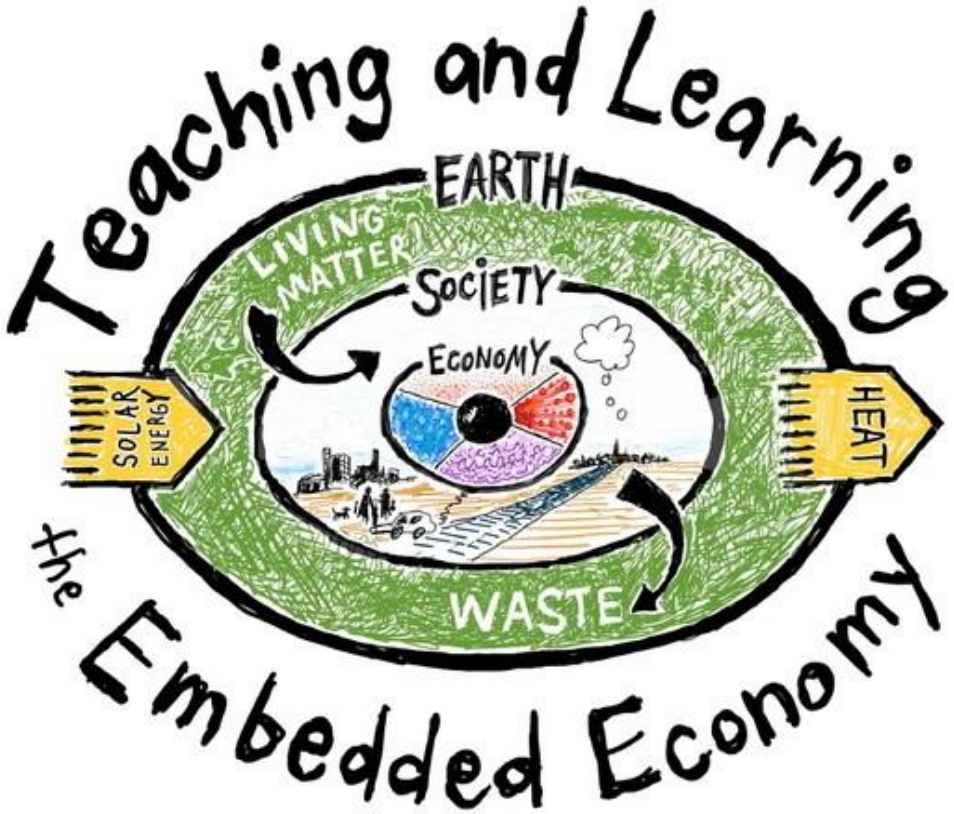
Example from pupils' explanations

L: Right you see Trump.. Maybe because of the decisions he made there will be more wars. When there are wars companies will have difficulties finding raw materials and so on.. People can invest less and will get difficulties because … money will not grow at trees

[Not even discussing the social 'mess' war creates.]

→ It is very hard to step out of the neoclassical lock-in, even for teachers

→ In the 2nd cycle, we will focus on teachers' learning during the LDW



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