



# TRANSDISCIPLINARY EDUCATION

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# TRANSDISCIPLINARY EDUCATION

## WHAT IS IT?

# TRANSDISCIPLINARY EDUCATION

This education takes place through collective and collaborative interactions across disciplines and with actors external to the higher education institution.

*(Fam et al., 2018)*

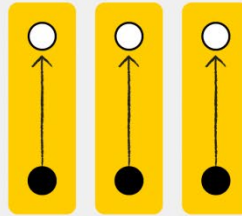
This approach aims at identifying, structuring, analyzing and tackling complex problems within society

*(Pohl & Hirsch Hadorn, 2007)*

<https://www.uu.nl/en/research/transdisciplinary-field-guide/transdisciplinary-education>

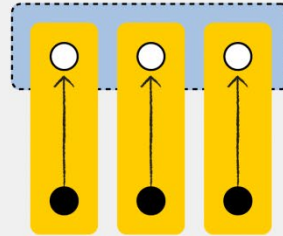
# TRANSDISCIPLINARY EDUCATION

- Goal, shared knowledge
- Discipline
- ⦿ Stakeholder participants
- Academic knowlegde
- Conventional knowlegde
- ⋯ Thematic umbrella



## DISCIPLINARY

- Within one academic discipline
- Disciplinary goal setting
- Develops new disciplinary knowledge



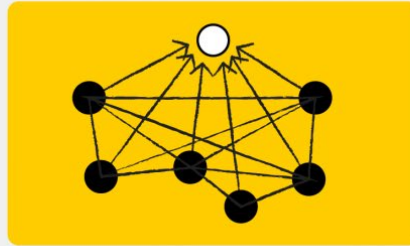
## MULTIDISCIPLINARY

- Multiple disciplines
- Multiple disciplinary goals set under one thematic umbrella

*What is transdisciplinary research? - Transdisciplinary Field Guide - Utrecht University (uu.nl)*

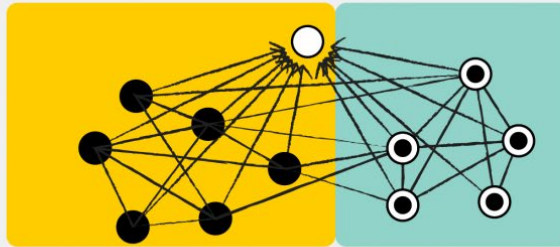
# TRANSDISCIPLINARY EDUCATION

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## INTERDISCIPLINARY

- Crosses disciplinary boundaries
- Develops integrated knowledge
- Draws from and contributes to 'inderdisciplines'



## TRANSDISCIPLINARY

- Crosses disciplinary and sectorial boundaries
- Common goal setting
- Develops integrated knowledge for science and society
- Draws from and contributes to 'inderdisciplines'

*What is transdisciplinary research? - Transdisciplinary Field Guide - Utrecht University (uu.nl)*

# TRANSDISCIPLINARY EDUCATION

WHY?

# WHY TRANSDISCIPLINARY

- *Relevant for tackling wicked problems*
- *Knowledge re-creation*
- *Universities as change makers*
- *UNESCO: Re-imagining Our Futures Together: A new social contract for education, 2021*

*“an integral education of the human being”*

*Nicolescu, 1997*

# RIPPLE EFFECT

*"The intention is not to 'solve the problem', as this is impossible in such complex causal chains, but instead to introduce incentives into the system that will positively support or (partly) initiate and accelerate transitions.*

*It is like throwing stones, releasing fish, or even placing dams in a river, knowing that the subsequent ripples and blockages will influence the movement and direction of the water, creating new streams, alternate flows, or completely new river routes.*

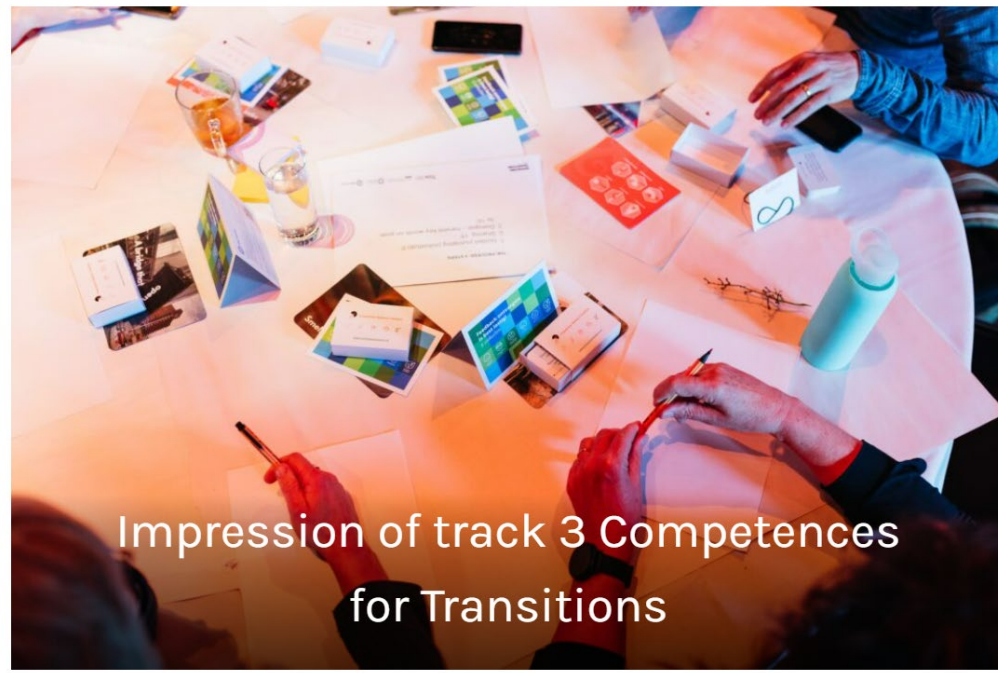
*J. sassen, C. Lamain & F. v. Gemerden, 2023  
Transdisciplinary Research: if it's so important, why aren't we all doing it?*



# TRANSDISCIPLINARY EDUCATION

HOW?

# HOW



Impression of track 3 Competences  
for Transitions

# TRANSDISCIPLINARY COMPETENCES

- Critical thinking
  - System thinking
  - Collaboration
  - Communication
  - Reflection
  - Creativity
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- (Disciplinary) Grounding
  - Perspective taking
  - Finding common ground
  - Integration

# **EWUU TRANSDISCIPLINARY EDUCATION**

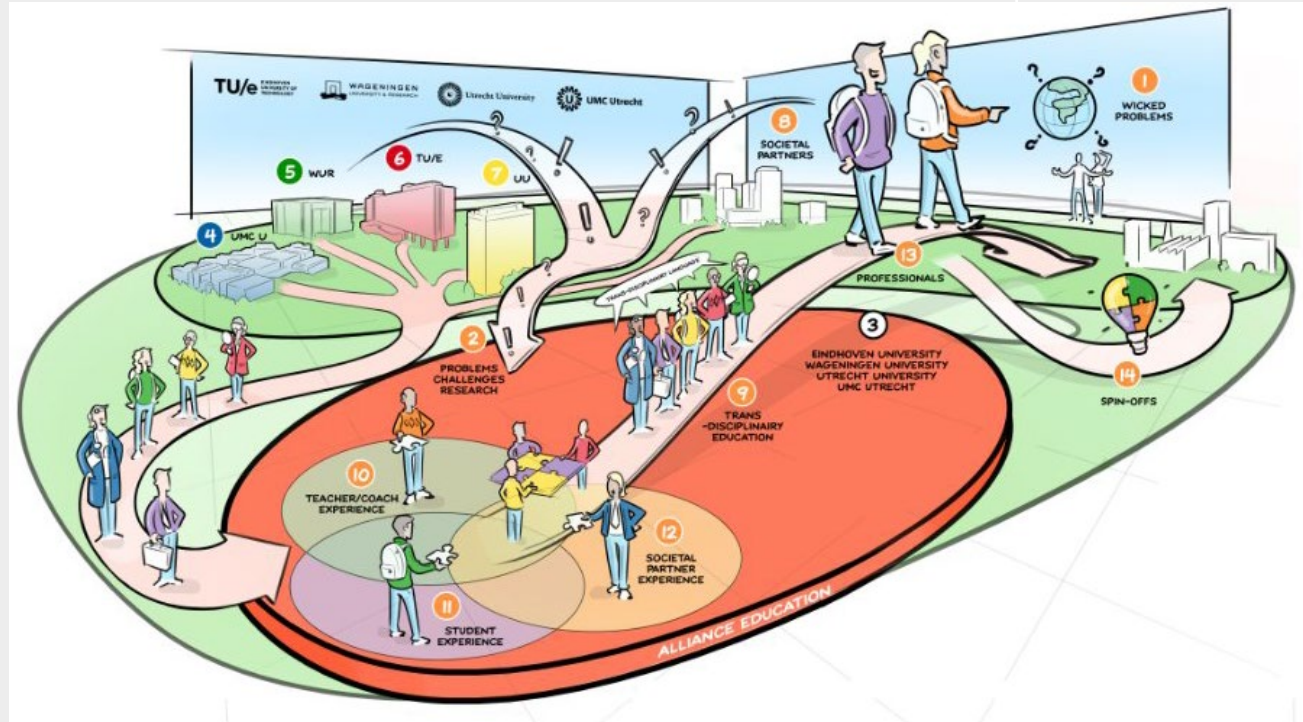
## **Focusing on:**

- **Education for Students**
- **Education for Professionals**
- **Educational Research**
  
- ❖ **Support and consult on course design**
- ❖ **Developing educational activities and programs**
- ❖ **Connecting initiatives and supporting collaborations**

# TD IN EDUCATION

## Curriculum:

- 6 co-created and courses in EWUU, related to challenges



# TD IN EDUCATION

For staff:

- Didactics for continuing education
- NEW: online course

For professionals:

- Optimizing nutrition and exercise for cancer patients



# CENTRE FOR UNUSUAL COLLABORATIONS

Focusing on:

- Grants, training and support for inter- and transdisciplinary collaborations for midcareer academics



A space to find support for unusual inter- and transdisciplinary research



A hub for training and education on competences for collaborations across boundaries



A lab to understand and learn about the process of collaboration



A source of shifts in academic culture and its system

# SPARK TRAINING FOR RESEARCHERS

## CUCo's Spark training: interdisciplinary competences



### Disciplinary grounding

Becoming aware of one's disciplinary biases and assumptions

- ✓ Embodied mapping
- ✓ Empathy maps



### Perspective-taking

Appreciating differences

- ✓ Interplanetary travel
- ✓ Unravelling multi-, inter- and trans-disciplinarity



### Finding common ground

Becoming aware of tension in complexity and ambiguity

- ✓ Stick exercise



### Integration

Integrating perspectives in unusual collaborations

- ✓ Generating integrated research questions



# TD IN TRAININGS

- Hackathon on TD collaboration(CUCo, TNO, EWUU Ed) **Feb 6-7<sup>th</sup>, 2025**
- ITD conference **4-8 November 2024**, Utrecht
  - *Workshop for changemakers: Fostering IDG for Sustainable Education*
  - *Workshop: Training for fair, inclusive, equitable and transformative transdisciplinary collaborations*
  - *Workshop: Integration is the Name of the Game: Co-Learning about Knowledge Integration Practices in Unusual Collaborations*
- Modular TD training (under development) for researchers by CUCo i.c.w. Pathways to Sustainability
- Trainings during in Teaching & Learning days tba

# TD IN RESEARCH

Education Research focuses on:

- **Adaptive Expertise and Lifelong Development:** Fostering Adaptive Expertise through Lifelong Learning Frameworks.
- **Challenge-Based Learning and Teaching:** Research into challenge design, didactics, teacher competencies, student experience and the implementation and upscaling of challenge-based learning (CBL).
- **Technology support for adaptive expertise:** development of AI and machine learning-supported learning environments.
- **Collaboration with social partners:** Co-creation of educational and professional development programs with social partners.

# OPEN ACCESS RESOURCES

- **CBL design guide:** [CBL platform](#)
- **IDG toolkit:** [Transition Makers Toolbox](#)
- **CUCo toolkit :** [Toolkit – Centre for Unusual Collaborations \(ewuu.nl\)](#)
- **Reports/papers:**
  - [Advice report: supporting transdisciplinary collaborations that are fair, inclusive and equitable – Centre for Unusual Collaborations \(ewuu.nl\)](#)
  - [Finding joy, creativity and meaning through unusual interdisciplinary collaborations | Humanities and Social Sciences Communications \(nature.com\)](#)
- **Blogs:**
  - [Understanding exclusion, sharing benefits and building in reflection in transdisciplinary collaborations – Integration and Implementation Insights](#)
  - [Towards fair transdisciplinary collaborations that honour epistemic justice – Integration and Implementation Insights \(i2insights.org\) \(i2insights.org\)](#)
  - [Not just in our heads: Embodied and creative practices for creating connection – Integration and Implementation Insights \(i2insights.org\)](#)

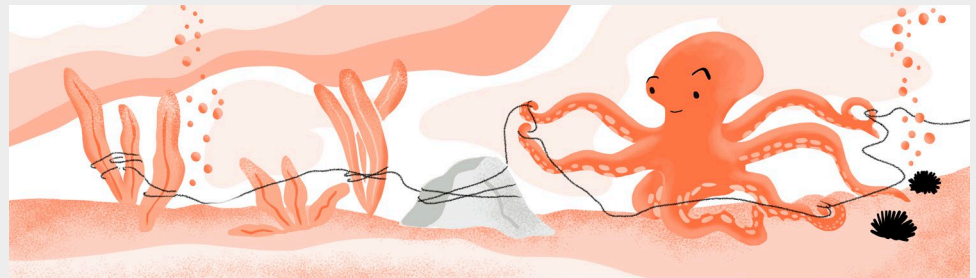
# CALL FOR SPARK GRANT SPRING '25

Spark grants aim to stimulate unusual collaborations to address societal challenges. The grants offer initial financial support to start building a committed project team and explore the potential of an idea and/or test whether it can be taken further and developed into a project application, for an Unusual Collaborations grant or another funding scheme.

The Spark programme consists of two phases: a series of four half-day workshops (phase one) followed by a period of time in which a research topic can be explored with a team (phase two).

## Spark Phase 1: training dates

- Monday, 10 March 2025
- Monday, 17 March 2025
- Monday, 24 March 2025
- Monday, 31 March 2025



[Spark grants - Centre for Unusual Collaborations \(ewuu.nl\)](http://ewuu.nl)

# WANT TO KNOW MORE?

Join us for the Lunch & Learn on October 17th, 12.15 -13.00

## Recipe or magic? Knowledge integration in interdisciplinary research

Knowledge integration – what is it and how does it happen? In inter- and transdisciplinary research the ultimate aim is to integrate knowledge from different fields and/or domains. Is it a black box or are there tools to better understand and enable processes of integration. Learn from research and real-world experiences of a CUCo-funded team as they share their journey and outcomes

With Annemarie Horn (UU), Sylvia Brugman (WUR) and Anke de Vrieze (CUCo)

# DISCUSSION POINTS

- Do you think there are challenges in facilitating this type of environment in education ? Which are they ?
- Do you have ideas of possible opportunities in your network for facilitating Transdisciplinary Education?

**Contact us:**

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