

# Ethics and Integrity Education in Times of Emerging Technologies

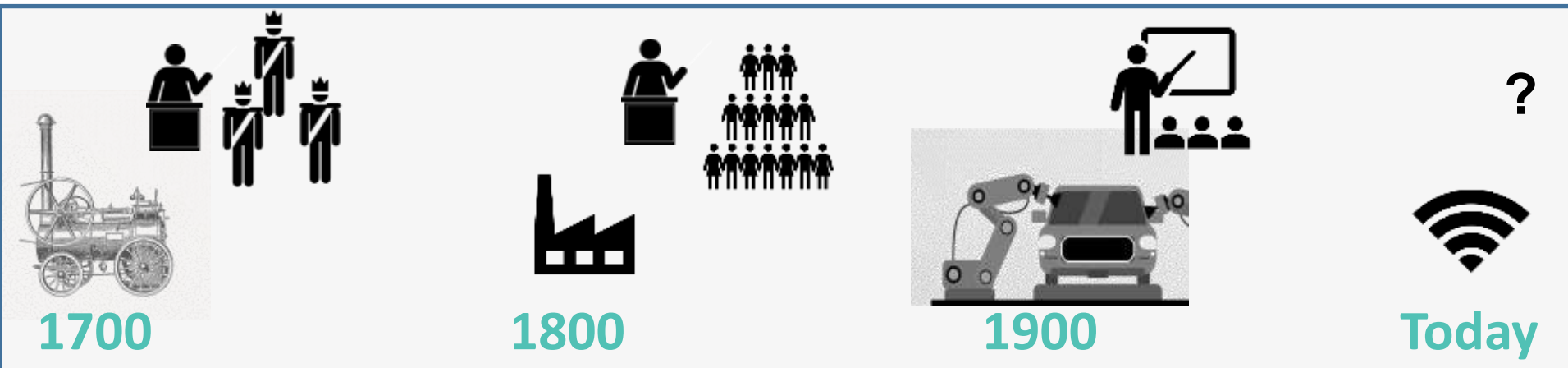


27<sup>th</sup> Forum of National Ethics Councils – NEC  
19-20 May 2021, Lisbon (online)  
Prof. Dr. habil. Julia Prieß-Buchheit



# Emerging Technologies and Higher Education

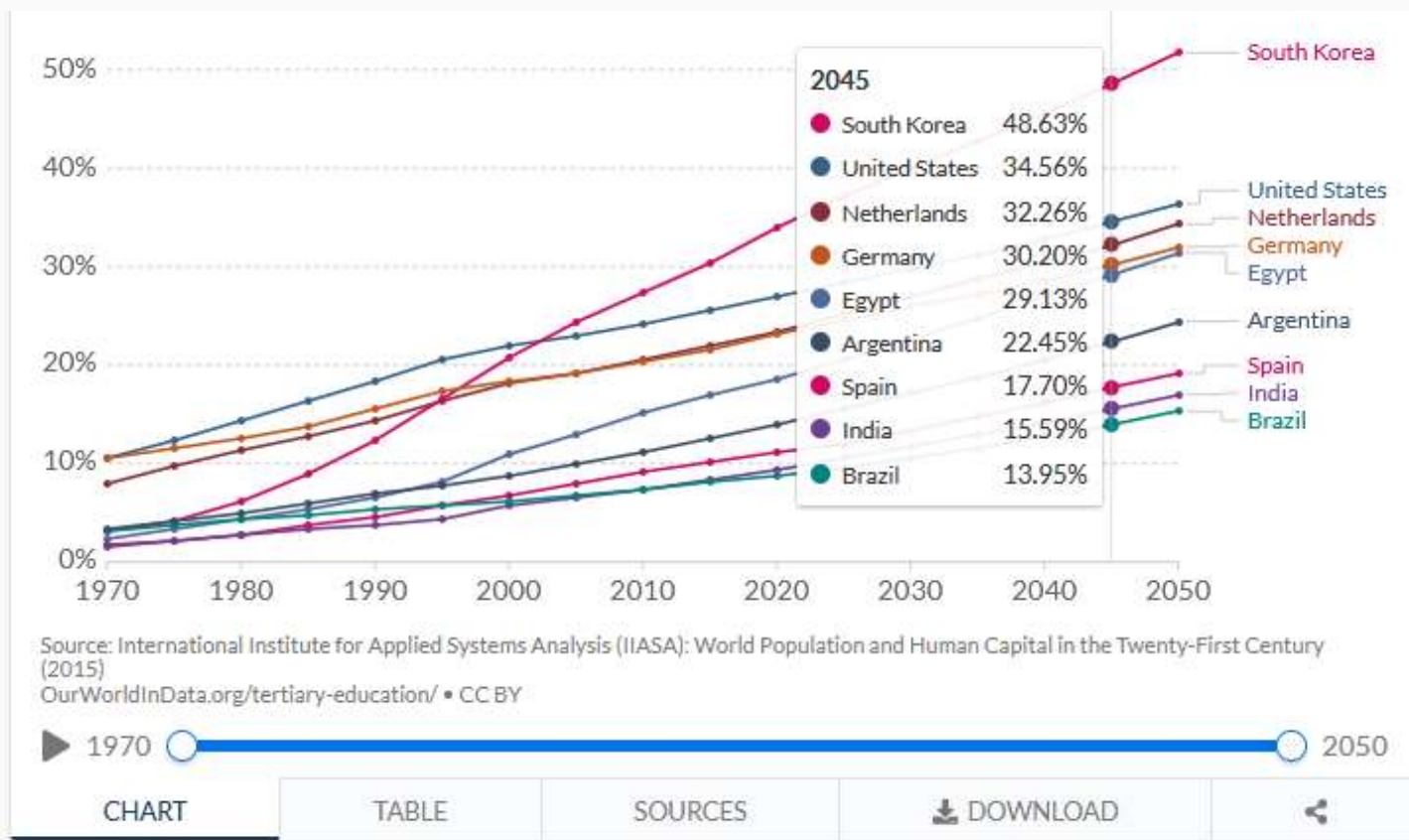
In which way do higher education institutions alter their study programmes in times of emerging technologies?



# The Future of Formal Higher Education

The numbers completing degrees is expected to increase around the world as advanced skills become more important in both developing and developed economies.

For more information on how these projections are constructed, visit the projections of future education page [here](#).



# Two challenges of HEIs in times of emerging technologies

1. New phenomena such as big data, artificial intelligence, (un-)biased algorithms etc. occur across disciplines.
2. New learning settings such as digital platforms, open educational resources, deep learning-driven sessions, MOOCs establish.

→ **Uncertainty/VUCA**



# Three overall learning goals in times of emerging technologies

1. Sensitivity (**awareness**),
2. choice of action (**reasoning**), and
3. motivation (**commitment**)

are three overall learning goals  
to handle, use, and judge

the “profound shifts across all industries, marked by the emergence of new business models, the disruption of incumbents and the reshaping of production ... as well as the paradigm shift ... in how we work and communicate, as well as how we express, inform and entertain ourselves” (p. 1-2.).

Schwab, K., 2016, The Fourth Industrial Revolution, World Economic Forum.



# First Teaching and Learning Principle in times of emerging technologies



**“Be relevant to each individual in their circumstances.**

→ Relevance ensures learning engagement and understanding.”

PRIß-BUCHHEIT, J. BOURGEOIS-DOYLE, D., GUERRETTE, J. MILLER, K. AND SYKES, L. (2021)  
Trust in Science: Developing a Learning Environment ... , *AISHE*, 13(1), [Open Access].

# Second Teaching and Learning Principle in times of emerging technologies



**“Be as open as possible to contributions from as many people as feasible.**

→ A multidisciplinary approach is required as a diversity of skills, information sources, and experiences are needed”.

PRIß-BUCHHEIT, J. BOURGEOIS-DOYLE, D., GUERRETTE, J. MILLER, K. AND SYKES, L. (2021) Trust in Science: Developing a Learning Environment ... , *AISHE*, 13(1), [Open Access].

# Third Teaching and Learning Principle in times of emerging technologies



**“Ensure equitable access to as many people as practical.**

→ ... given the technological nature of new learning environments, extra care must be taken to consider the varying technological capacities of potential users to ensure equitable access and to ensure different points of view and information inputs”.

PRIEB-BUCHHEIT, J. BOURGEOIS-DOYLE, D., GUERRETTE, J. MILLER, K. AND SYKES, L. (2021)  
Trust in Science: Developing a Learning Environment ... , *AISHE*, 13(1), [Open Access].





# Fourth Teaching and Learning Principle in times of emerging technologies



**“Include mechanisms for rational dialogue.**

→ This is essential to support evidence-based thinking and decision making, as well as ensuring mutual understandings.”

PRIß-BUCHHEIT, J. BOURGEOIS-DOYLE, D., GUERRETTE, J. MILLER, K. AND SYKES, L. (2021) Trust in Science: Developing a Learning Environment ... , *AISHE*, 13(1), [Open Access].

# Path2Integrity's Two Component Approach

Path2Integrity supports formal and informal learning.

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**Path2Integrity's aims to tackle challenges and uncertainty within research and surrounding research results by:**

- providing rational arguments
  - setting common objectives and norms
  - establishing preconditions for dialogue
  - weighing the pros and cons of different actions
  - ask learners to do something
- 

Path2Integrity's dialogical approach aims to build **common language**, answer questions, and **develop solutions** for a (common) purpose, under the condition that “**equal rights and equal duties** are to be demanded of all participants. Neither assertions of authority nor aggression, neither deception nor irreconcilable promises, should occur therein“ (Janich 2009, 20-21) [translation from JPB].

# Informal Learning: Designing an Environment

- role-models
- infographics
- booklets
- postcards
- videos
- social media
- short key messages
- thematic fact sheets
- etc.



# Formal Learning: P2ILC Programme



The P2ILC learning programme enables researchers on how to argue in favour of responsible research practice, and citizens on how to argue in favour of reliable research results.

Online Learning Platform: [www.learning-p2i.eu](http://www.learning-p2i.eu)

# Path2Integrity

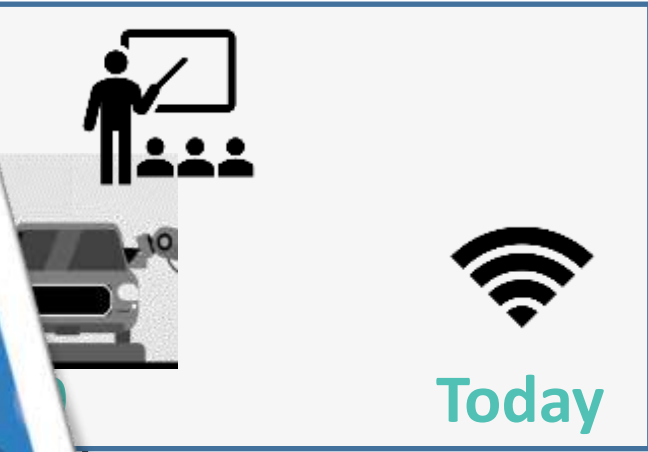
**How should training in HEI look in times of emerging technologies and uncertainty?**

Concentrate on dialogues

to build a common language

to develop solutions

to set equal rights and equal duties as a standard



# Project Facts and Contact

<b>Topic</b>	Innovative methods for teaching ethics and research integrity
<b>Consortium</b>	9 partners representing 5 EU countries
<b>Duration</b>	36 months (January 2019 – June 2022)
<b>Programme</b>	Science with and for Society (SwafS), EC
<b>Horizon 2020</b>	Coordination and Support Action (CSA)

## Contact

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