Digital Transformation in Education & Responsible Technology

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Villemard, 1910 – At School
Ruining the surprise

1. *Technology* is an integral part of education
2. Schools have a *responsibility* for that technology
3. *Responsibility* is a practice
Who am I?

Duuk Baten
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SURF Innovation Lab – Program Public Values

- ‘Responsible Tech’ – how do we use new technology responsibly
- Member of EU expert group for ethical guidelines for AI in education
- Dutch AI coalition working group Education
- GPT-NL (training a Dutch LLM)
- Expedition AI – collaborative approach towards AI in education by SURF & Npuls

WO: Research-oriented higher education
HBO: Higher professional education
MBO: Vocational education and training
UMC: University teaching hospital
The digital transformation threatens our universities. It is time to draw the line

Digital transformation and privatization in higher education go hand in hand. Dependence on (American) tech companies is increasing. Time to draw the line, say the rectors magnifici of the Dutch universities.

Rectores Magnifici of the Dutch Universities 22 december 2019, 20:00
Generative AI
General-Purpose Technology

Multi-modal: image, audio, and 'intelligence' combined
Realise technology shapes our view of the world
Digital technology is part of the primary process of education
How do we cope with these developments?
**REACTIVE**

We respond to the noise, feeling the pressure to act now!

‘Lazy innovation’

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**AMBITIOUS**

Understand the trend, prepare for the future. Taking ownership of our responsibilities.
Responsibility, it’s extra

Responsibility
A feeling of duty or rational that you have a (responsibility) to someone. A duty to take action that will protect their interests.

Accountability
Being answerable for one's actions and their outcomes.

Liability
Legal responsibility for one’s actions or inaction.
How technology shapes our perception

https://nippur.nl/tim-versus-politie-algoritme/
“In that context, the Board rules that the <institution> indeed has *a duty of care* to check whether the software it uses works in a non-discriminatory manner before it starts using it.”

*The Netherlands Institute for Human Rights*
Frequency of dataset usage by country

Countries are distorted by frequency of usage. Datasets originating in the US account for the most usages (26,910).

This map shows how often 1,933 datasets were used (43,140 times) for performance benchmarking across 26,535 different research papers from 2015 to 2020.
Value Compass for
digital transformation of education

Autonomy
- Freedom of choice
- Independence of educational institutions
- Professional autonomy of teachers/lecturers
- Diversity
- Safeguarding of private life and personal data
- Self-determination of pupils and students
- Freedom of education

Justice
- Equality
  - Equal opportunities
  - Equal treatment
- Integrity
  - Trustworthiness of information, content, data, and systems
  - Transparency
  - Effectiveness
  - Democratic control
  - Sustainability
- Inclusivity

Humanity
- Social cohesion
- Health, well-being
- Safety
- Personal development
- Meaningful contact
- Respect

edu.nl/5bvd4
How do you make sure you responsibly engage with new technology?
Dealing with Reality

“Culture of accountability”

Helen Nissenbaum (1977) identified four barriers to accountability in digital systems and society:

1. The problem of many hands
2. The acceptance of computer bugs as an inherent element of large software systems
3. Using the computer as scapegoat
4. Ownership without liability
Responsibility as Practice
Responsibility as Practice

The idea that responsibility is *not just a theoretical concept*, but a *practical skill* that needs to be developed and exercised.
“Ethics is a process, not a destination”

National Academies of Sciences, Engineering, and Medicine (USA)

https://doi.org/10.17226/26507
A good start in 5 steps

We formulated 5 recommendations in our discussion paper

‘Responsible tech: how we ensure new technologies meet public values’
How do we get started?

- Assess your current situation and formulate your ambitions
- Create the environment to practice ethics
- Involve all relevant stakeholders
- Hold yourselves accountable
- Reflect and share your learnings
How do we get started?

- Recognise where you are at. E.g. impact assessments (IAMA) of AI ethics maturity-models.
- Formulate your ambitions. What are you trying to achieve, which values are central?
- Make choices, do you want to use certain technologies?
How do we get started?

- Use an iterative approach, try something, make choices, and reflect
- Make room for tensions and discomfort
- Arrange for diverse project-teams, steering-groups, and advisory committees
How do we get started?

• Create the needed structure to support taking responsibility

• Prioritize transparency around technology

• Take responsibility for the applications you promote
As long as you're learning, you're not failing.
Where do responsibilities lie? How do we enable ‘responsibility as a practice’? What do we need (from policy)?
Thank you for your interest!

Let’s keep in conversation, and keep learning from each other.

Feel free to reach out:
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Links & literature

- WRR (2021) ‘Opgave AI’ - (link)
- Npuls (2024) The state of AI and the modern education institution – (link)
- SURF (2023) Responsible Tech: On Public Values and Emerging Technologies - (link)
- Forthcoming: Molenaar, I., Baten, D., Bard, I., & Stevens, M. (2024). AI and Education: Different Perceptions and Ethical Directions. In N.A. Smuha (Eds.), Cambridge Handbook on the Law, Ethics and Policy of Artificial Intelligence (2024)