Visionpaper on responsible AI in education

A collaborative process from development to use

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What is AI?
“AI refers to **machine-based systems** that can, given a set of **human defined objectives**, make predictions, recommendations, or decisions that influence real or virtual environments.

AI systems interact with us and act on our environment, either directly or indirectly. Often, they **appear to operate autonomously**, and can **adapt their behaviour by learning** about the context.”

(Unicef, 2021, p. 16; Holmes et al., 2022)
CYCLING NOTES.

A BICYCLE EXPLOSION.

A single tube tyre was being repaired in a Dayton, Ohio, workshop last month when it exploded with such force as to shake the whole building, whilst the operator was injured by being struck by the valve. The explosion took place when a red hot iron was introduced into it, from which we gather that the tyre was really full, not only of compressed air, but of a mixture of air and gas, the gas doubtless being due to the evaporation of the naphtha used in the rubber solution with which it was stuck together.
Until it can do dishes, home computer remains of little value to families

By David E. Sanger

NEW YORK—For some of the past three years, it has been the secret of the home computer industry, a secret whispered about. No one has figured out how a computer can be truly useful at home. This, after years of research and more than a billion dollars in sales by top manufacturers of personal computers, has been the question.

Is it still not a surprise? Writing the occasional letter hardly demands a heavy-duty word processor. Balancing the checkbook, printing out labels for Christmas cards and keeping track of receipts seem to be tasks better suited to pen, calculator and a 80-dollar word processor.

"What the world needs is a home computer that does what it says," said Peter Sisson, one of the personal computer industry's most influential observers, who was running a small computer company.

Most of the time, a computer does a lot of things that we can do with a typewriter. But it can do a lot less than a typewriter can do.

"We will think there is a market for computers," said a man who runs a small business. "We are not sure if there is a market." Two years ago, many people in the industry were not sure there was even a market for computer's computers as personal.

They would have said that they did not understand the growing multiple-billion-dollar industry that has turned the computer into an electronic brain. But in the last two years, more and more people have come to the conclusion that the computer is a good thing for the consumer.

In the last two years, the computer has been used in a variety of ways, from electronic games to keeping track of grocery lists. Even in the early days of 1982, when demand for small, versatile home computers seemed endless, there was no sign of this kind of home computer.

But in the home, Carter said, "people are not really looking for efficiency. They are looking for a computer that works."

The computer that works is one that can do a lot of tasks, such as keeping track of receipts, printing out labels for Christmas cards and printing out labels for Christmas cards. But it can do a lot less than a typewriter can do.

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And in 2024?
“AI is a hype”
“AI is not a hype”

Text to video – early 2023

Tekst naar video – early 2024

ChatGPT with GPT-4o

Zet in het onderwijs volop in op AI

Door die onvoorspelbaarheid leggen de scholieren van havo en vwo studerende AI gebruiken steeds vaak. Soms zijn de AI's niet altijd behulpzaam en kunnen ze fouten maken. Dit kan een stuk minder nuttig zijn voor de leerlingen. De methode die we gebruiken, is niet altijd het perfecte antwoord op elke vraag.

De manier waarop we evalueren, met papers, thessen en digitaal werk.

In twee minuten maakt juf Tessa een lesvoorbereiding. Maar zij is geen echt mens

Why?

Ethical guidelines on the use of AI and data in teaching and learning.

Today, the European Commission published a set of ethical guidelines for AI and data in education.
Artificiële intelligentie (AI) is als nieuwe technologie aan zijn opmars bezig in het onderwijs. Vanuit het Kenniscentrum Digisprong volgen we graag de huidige en toekomstige nieuwe tendensen binnen het AI-veld op.

Artificiële intelligentie
Ontdek hoe je deze innovatieve technologie op een verantwoorde manier kan inzetten in je onderwijs.

Help! Mijn leerlingen gebruiken AI

DALL' E 2
Wedden dat ook jij in Google Afbeeldingen al eindeloos hebt zitten scrollen en zoeken naar die ene foto om je te toetsen, op je werkblad of in een ander leermiddel te zetten? Of na een hele tijd tevreden te zijn met eenje die bijna is wat je zoekt? En dacht je toen wat aan de auteursrechten? Maar de pixels niet te groot omdat de resolutie van de foto niet hoog genoeg was? Vond je al te zien een stockfoto met een watermerk erop? De artificiële intelligentie (AI) van DALL' E 2 helpt je om dat gemakkelijker te maken. Daarom leggen we je graag uit wat DALL' E 2 is, wat de aandachtspunten zijn en wat je met de app kunt doen.

Gedifferentieerd lesgenoot met adaptieve oefenplatformen
Technologie zal de leerkraft in de klas niet zomaar vervangen. Wel kan het je als leerkraft ondersteunen en versterken. Je kan er bijvoorbeeld naar zoeken dat technologie bepaalde delen van je takenpakket overneemt, zodat je als leerkraft meer tijd hebt voor andere dingen. In onderstaand artikel gaan we in op het hoe en wat van adaptieve oefenplatformen. Stay tuned!

Ethische richtlijnen rond AI in het onderwijs (artikelereks)
Artificiële intelligentie is aan een opmars bezig, ook in het onderwijs. Om het potentieel van AI op een goede manier te benutten, is het belangrijk dat onderwijsprofessionals zicht hebben op wat deze technologie is. Hoe werkt AI? Wat zijn de voordeelen van AI in het onderwijs? Wat zijn mogelijke risico's en aandachtspunten?

Kenniscentrum Digisprong werkt daarom aan een artikelereks die gebaseerd is op de verschillende hoofdstukken van de ethische richtlijnen voor het gebruik van AI in het onderwijs van de Europese Commissie.
Prompt: A dramatic representation of the good and bad use of AI in education.
OpenAI. (2023). ChatGPT4 + DALL·E 3 (November 2023) [Large language model + tekst to image] [https://chat.openai.com/]
Prompt: a dramatic representation of the good and bad use of AI in education
A diversitity of AI-applications

Teach and support learners

Support of educational professionals

Support of the educational organisation
Vision paper responsible AI in education

A collaborative process from development to use
Development of the vision
Phase 1

Exploration and preparation (March–May 2023)
- Identification of the most important trends and topics
  - Expert group on educational innovation
  - Advisory board
  - Elaboration of cases and workshops

Phase 2

Writing and publishing of vision paper (June–December 2023)
- Discussion on the results of phase 1 with advisory board
- Effects, values en options for action
- Confirmation of vision paper by advisory board
Experts in educational innovation and AI

- **Role:**
  - Inventory of trends and topics on AI in Flanders
  - Inventory of trends and topics on educational innovation and renewal

- **Characteristics:**
  - Technical and educational / pedagogical
  - Spread across Flanders and different knowledge institutions
Advisory board

- Role:
  - Confirmation of final vision paper from their own expertise + Commitment to actively engage with the vision paper
  - Active engagement
  - 3 x gathering

- Characteristics:
  - Key players in Flemish education
Workshops guidance ethics approach

- Microsoft Reading Progress, MySpeech, Smartschool

- Principles of guidance ethics approach
  1. Guiding ethics instead of judging
  2. Focus on specific technology in a specific setting
  3. Dialogue with stakeholders
  4. Shaping, framing and acting ethically
What are the basic requirements for responsible AI in education?
What is important for you?

https://app.wooclap.com/MTMTML
Basic requirements

1. The learning process of the learner is paramount from a pedagogical-didactical and socio-emotional perspective.

*Everyone involved in the learning process has an important role to play in interaction with one another.*
Basic requirements

2. AI is not an end in itself

*It is a possible means of achieving educational goals and must have added value for education.*

Adobe. (2024). Adobe Firefly (Firefly Image 2) [text to image]
https://firefly.adobe.com
Prompt: a dart flying towards a dartboard in a classroom
Basic requirements

3. AI applications in education are trustworthy

Trustworthy AI meets 7 key requirements

1. Human autonomy and oversight
2. Transparency
3. Diversity, non-discrimination and fairness
4. Societal and environmental well-being
5. Privacy and data governance
6. Technical robustness and safety
7. Accountability

https://op.europa.eu/nl/publication-detail/-/publication/d81a0d54-5348-11ed-92ed-01aa75ed71a1
Basic requirements

4. AI applications in education are based on shared values

The use of AI-applications has to be in line with the values you prioritize.

Adobe. (2024). Adobe Firefly (Firefly Image 2) [text to image]
https://firefly.adobe.com
Prompt: a queue of people coming in front of a school
Basic requirements

5. Responsible AI is a continuous process

Choosing AI is not a one-time exercise. It is an ongoing process of responsible development, procurement, use and evaluation.
Basic requirements

6. Education has a support network that is AI-ready and AI-resilient

Schools can rely on their broad school network to be AI-ready and -resilient. Knowledge and resource sharing is crucial.
Basic requirements

7. Professionalisation and responsible AI go hand in hand

*Digital literacy is crucial.*

Adobe. (2024). Adobe Firefly (Firefly Image 2) [text to image]
https://firefly.adobe.com
Prompt: a visualization of knowledge
Basic requirements

1. The learning process of the learner is paramount from a pedagogical-didactical and socio-emotional perspective
2. AI is not an end in itself
3. AI applications in education are trustworthy
4. AI applications in education are based on shared values
5. Responsible AI is a continuous process
6. Education has a support network that is AI-ready and AI-resilient
7. Professionalisation and responsible AI go hand in hand
Guidelines for responsible AI
Guidelines for responsible AI

A. See responsible AI as a process and make it part of your education and ICT policies

1. Determine in advance what your objectives are with the AI application
2. Ask yourself in advance whether the objectives can be achieved by other, better means
3. Apply moral values and ethical and legal frameworks
4. Involve stakeholders
5. Work together and take responsibility together
6. Evaluate the AI application at regular intervals.
And now?
Realisation plan

Which actions are needed to make responsible AI in education possible?
What is important for you?

https://app.wooclap.com/MTMTML

Resultaten
World Café

3 groups

15 minutes per session

Afterwards, the moderators switch tables
Questions

1. What are your current and future plans with AI in your platforms?

2. Do you find the 7 basic requirements for responsible AI in education important? Why? How do you take these requirements into account in your platforms?

3. How do you try to stay an alternative for commercial initiatives who provide learning materials?
1. What are your current and future plans with AI in your platforms?

2. Do you find the 7 basic requirements for responsible AI in education important? Why? How do you take these requirements into account in your platforms?

3. How do you try to stay an alternative for commercial initiatives who provide learning materials?