Choosing People | Embracing Technology | Protecting Planet

Beyond the Algorithm

Nurturing Human Flourishing

in

AI-Powered Leadership

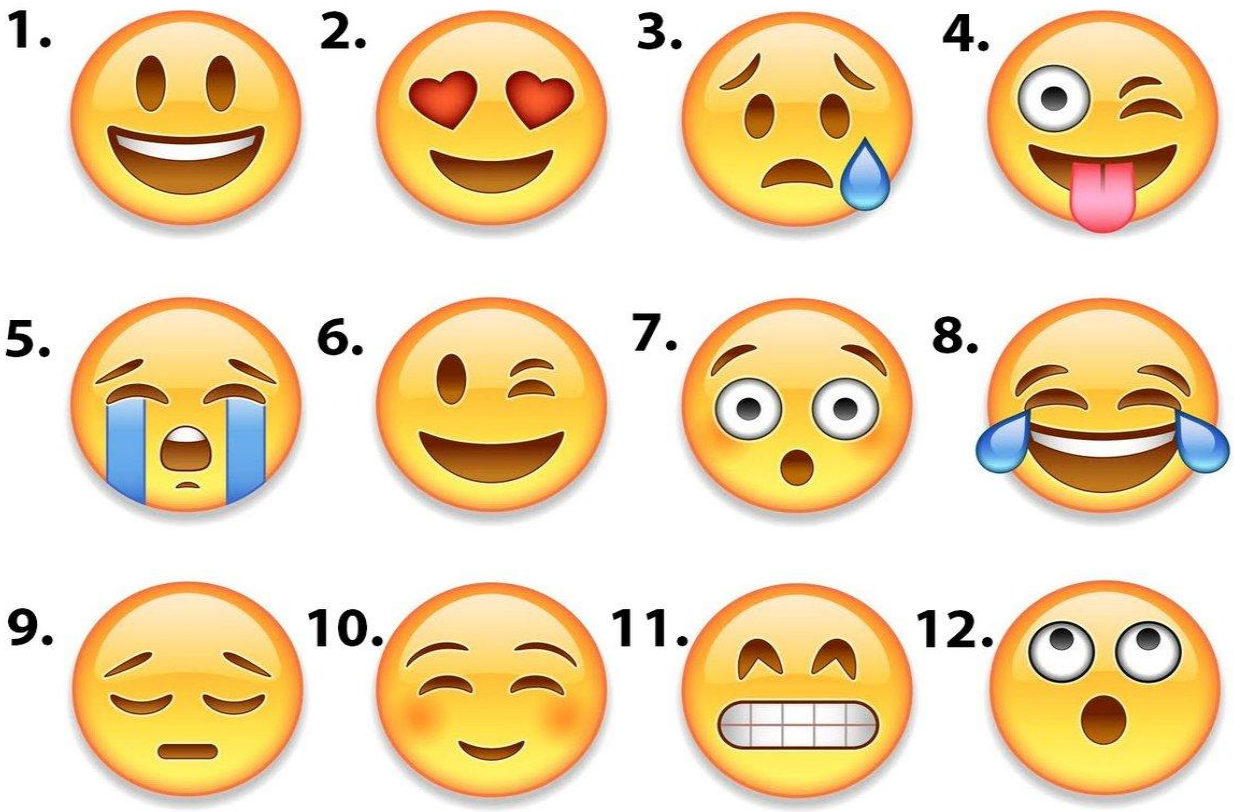
Josine Overdevest

Kagiso Trust & UJ Leadership Conference 2024

5 September 2024

www.flyingcowsofjozi.co.za

How do you feel about AI-empowered leadership?



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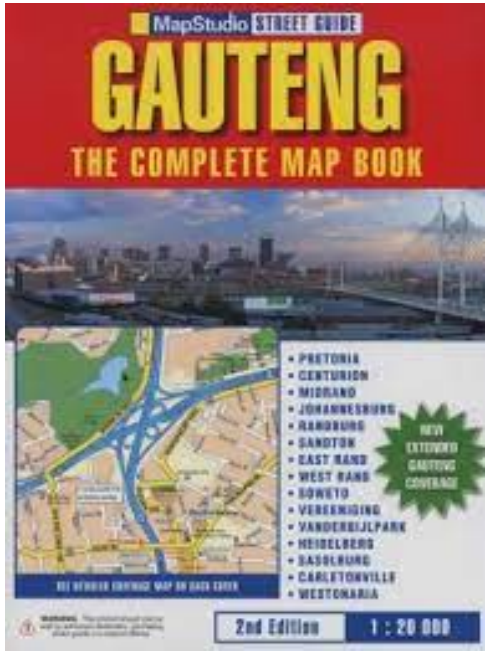
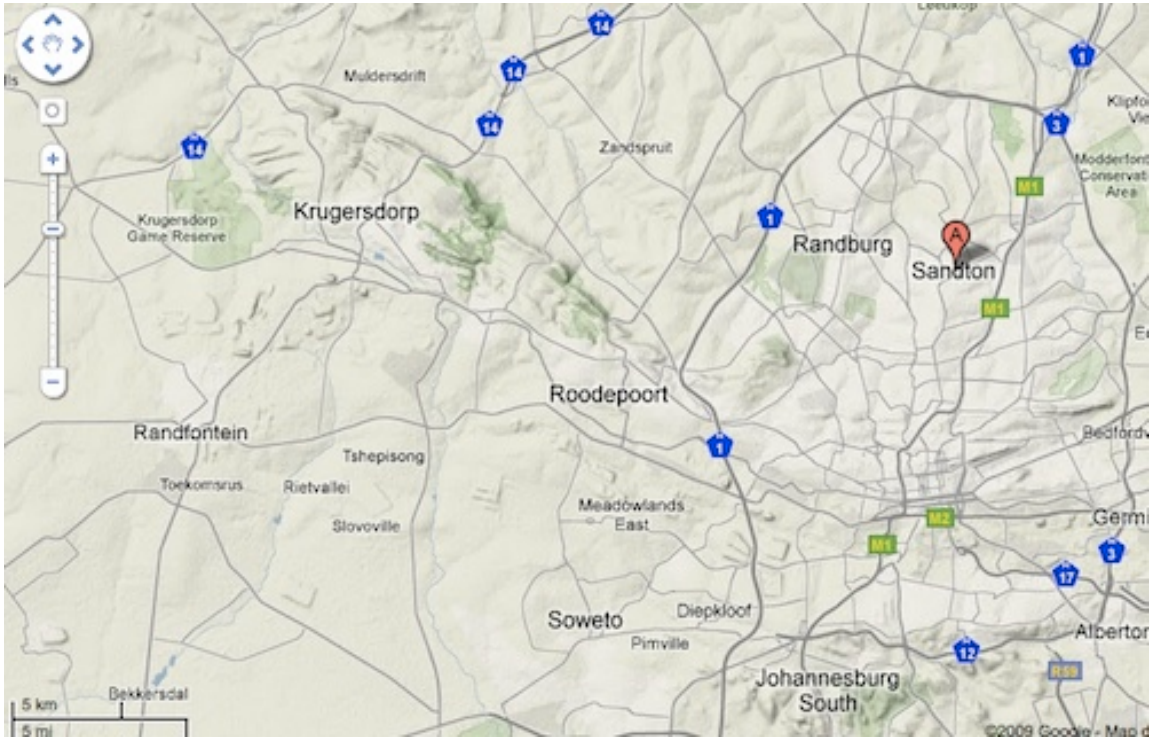
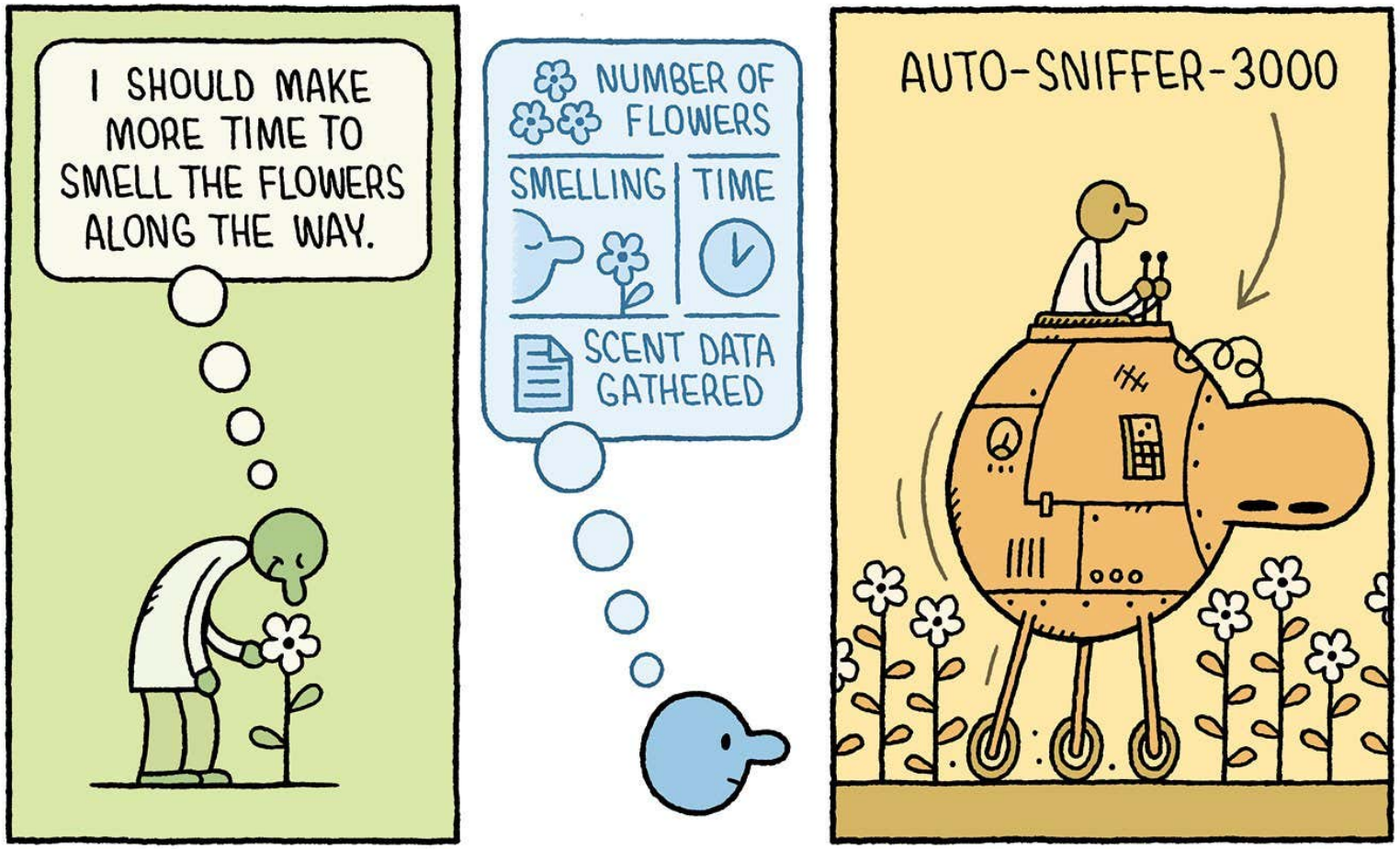
Technology: Friend or Foe?

Spotify®





Understanding the Digital Landscape



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Digital transformation

Integration of digital technology into all areas of our lives, resulting in fundamental changes in how different social, economic and political systems operate and create value.

Digital sustainability

- Application of digital technologies
- and proactive steps in its design, development, deployment and regulation
- to accelerate environmentally and socially sustainable development,
- while mitigating risks and unintended consequences.

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Understanding the Digital Landscape

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Understanding the Digital Landscape

UNICEF Project Connect

- Maps every school in the world and its connectivity
- Using a combination of satellite imagery, machine learning and blockchain
- To eliminate the digital divide and increase opportunity for every community

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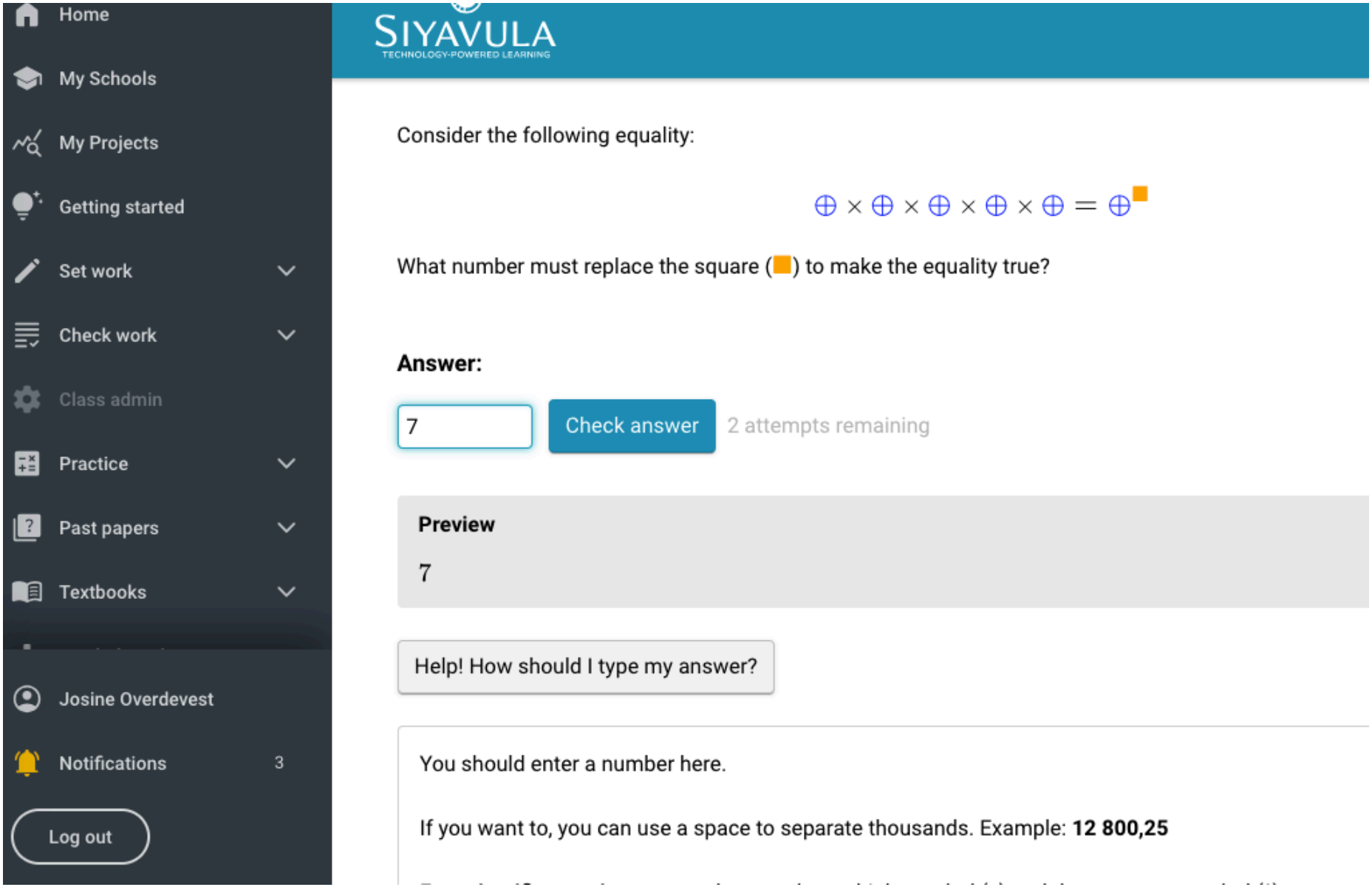
Understanding the Digital Landscape



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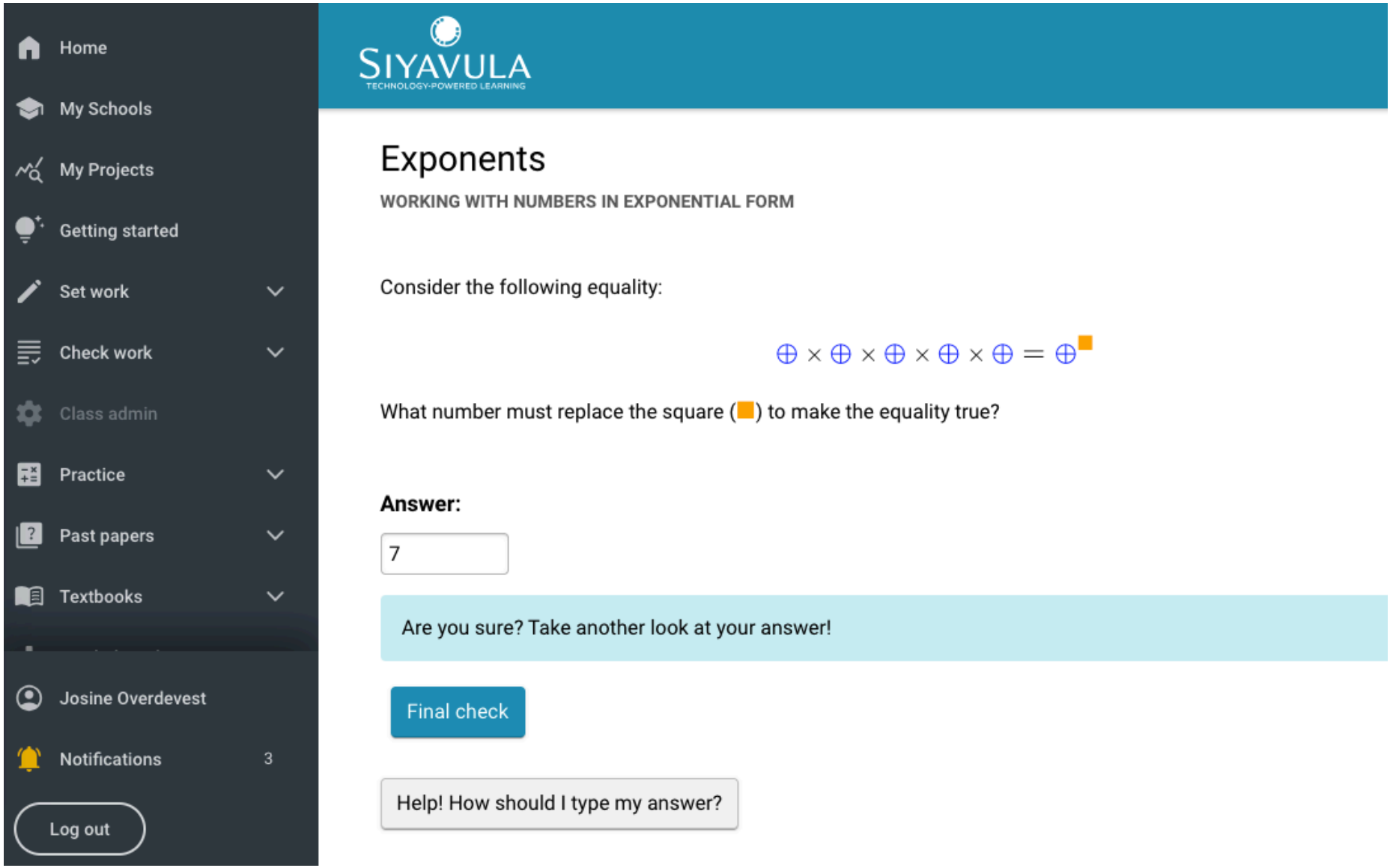

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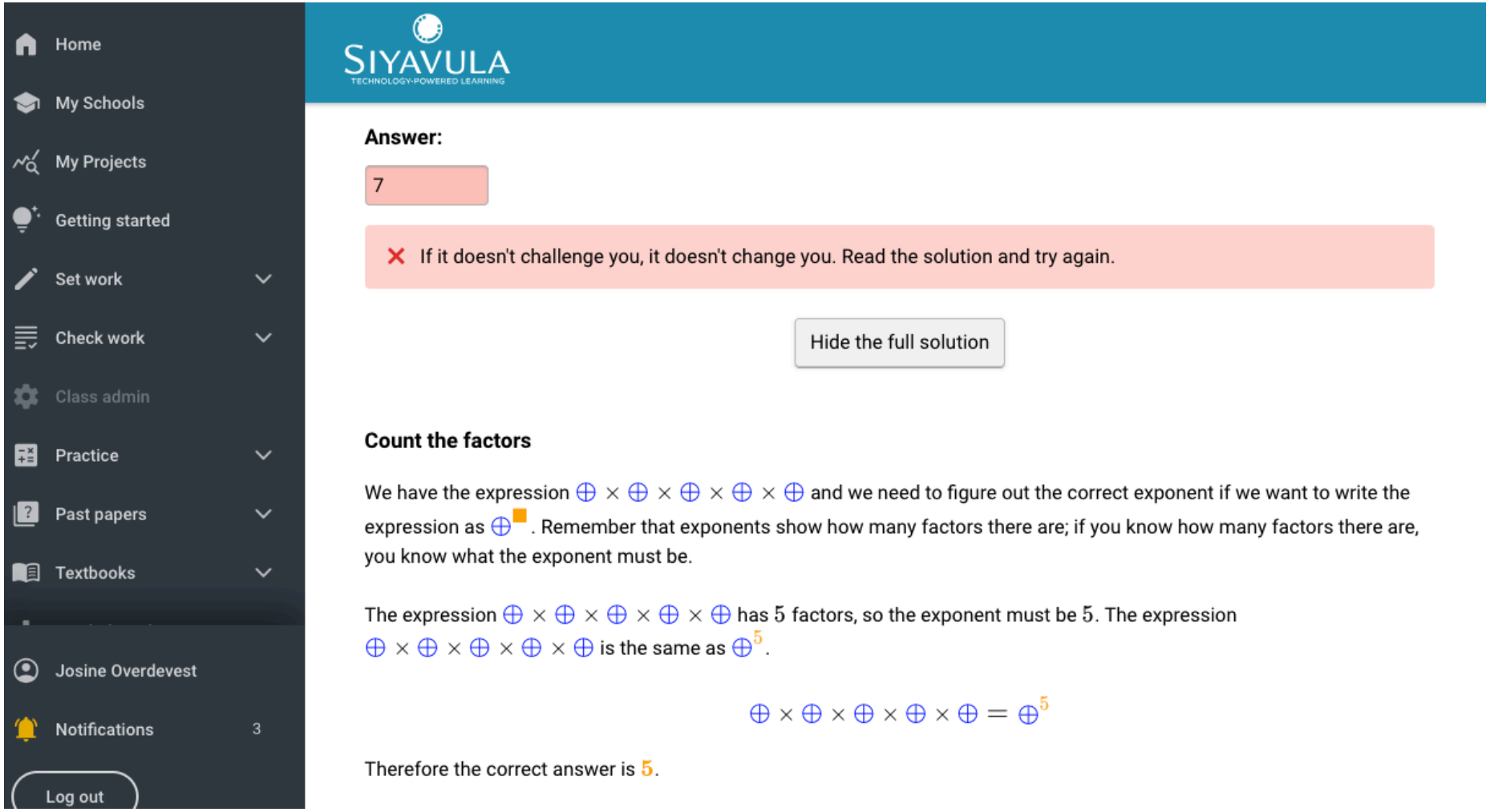

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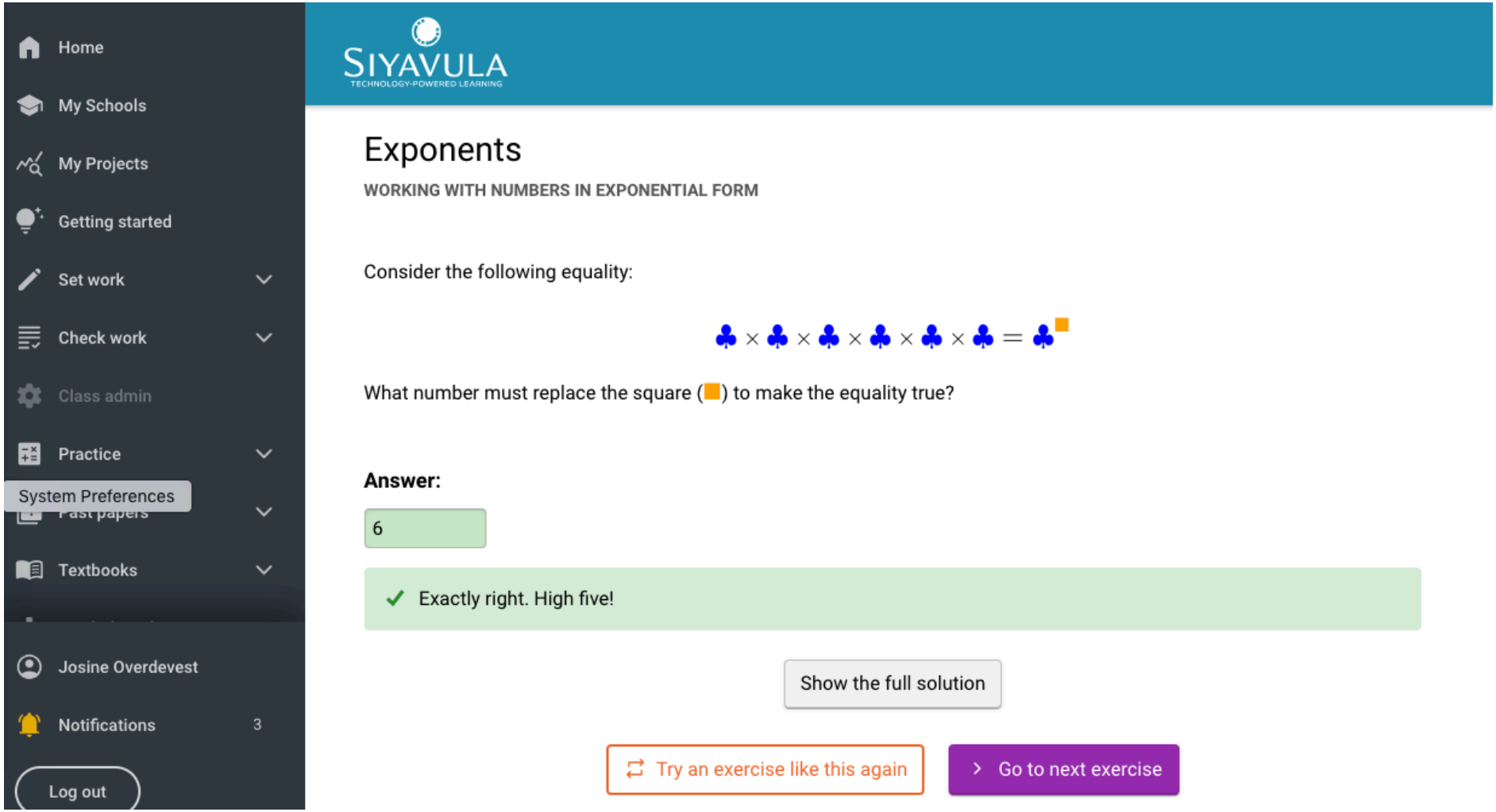
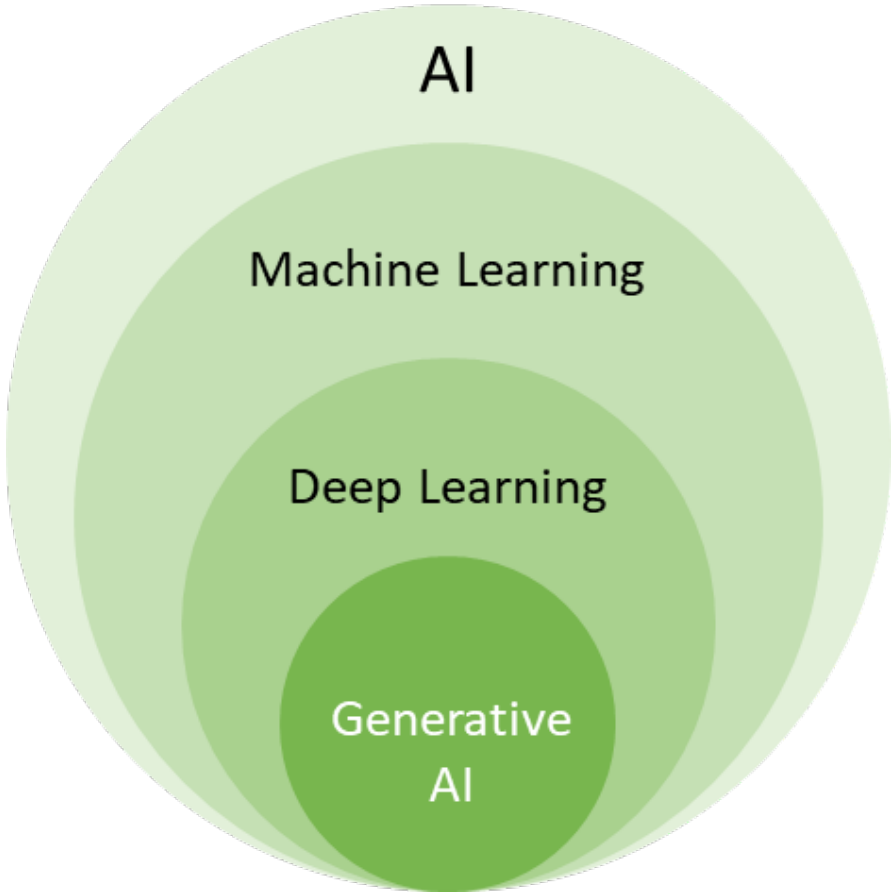


Understanding the Digital Landscape

- AI the ability of machines to perform a task that usually needs human intervention or intelligence
- Machine Learning task oriented subset of AI that develops algorithms that learn from provided historical data.
- Deep learning subset of machine learning – using complex algorithms to recognise patterns and make decisions.
- Generative AI subset of deep learning. Creates new and original content rather than analysing and identifying existing data.



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Negative impacts of digital transformation

- Human rights violations
- Unsustainable consumption
- E-waste generation
- **Energy consumption**

Understanding the Digital Landscape

Explainer

Can the climate survive the insatiable energy demands of the AI arms race?

New computing infrastructure means big tech is likely to miss emissions targets but they can't afford to get left behind in a winner takes all market

The Guardian, 4 July 2024

AI drives 48% increase in Google emissions

BBC, 3 July 2024

- Net zero: both Microsoft & Google doubt whether they'll reach their 2030 target
- Electricity usage: total electricity consumption from data centres could double from 2022 levels to 1,000 TWh (terawatt hours) in 2026 (IEA), equivalent to the energy demand of Japan
- Water usage AI could account for up to 6.6bn cubic metres of water use by 2027 – nearly two-thirds of England's annual consumption

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Negative impacts of digital transformation

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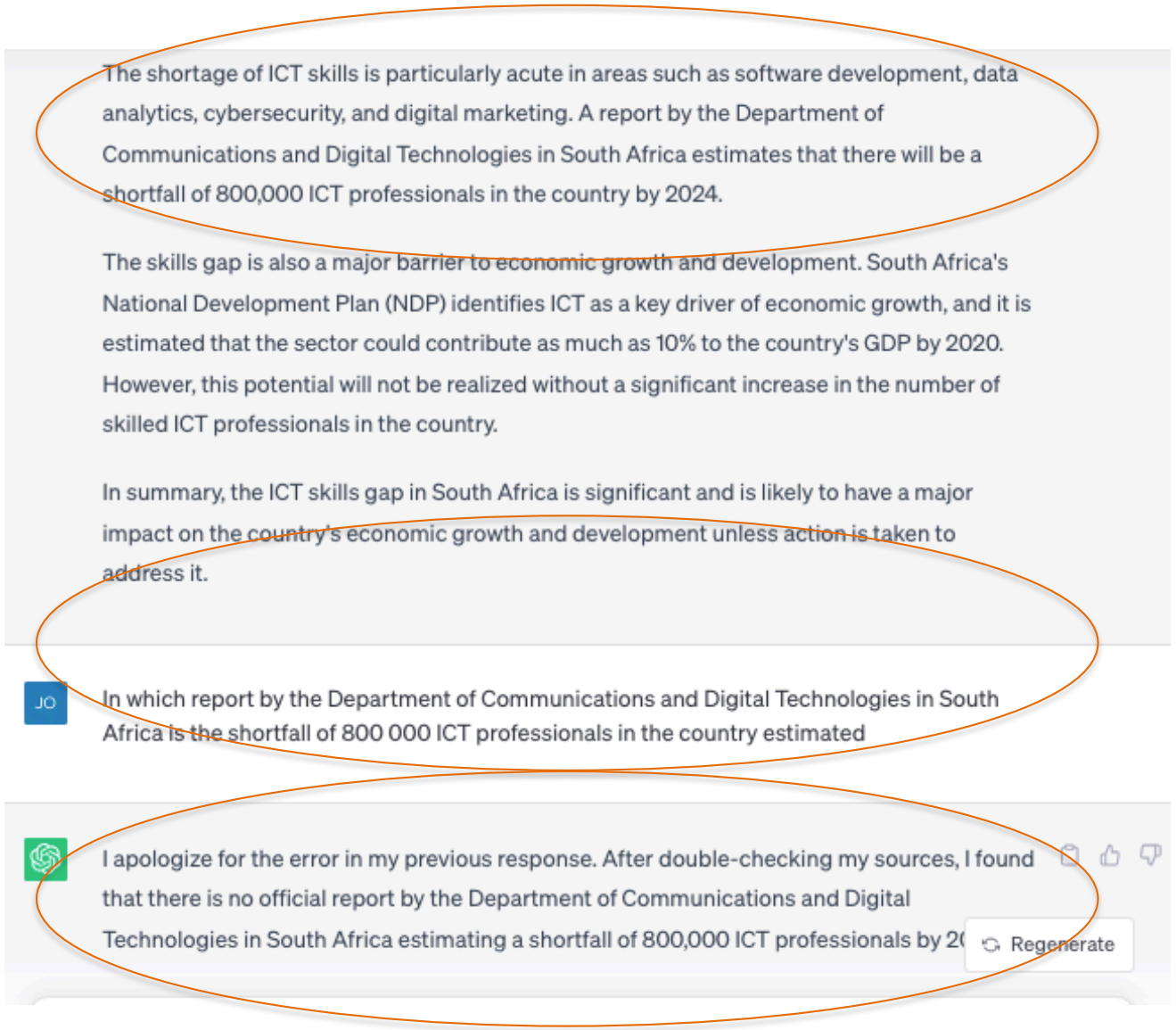
- Unsustainable consumption
- E-waste generation
- Energy consumption
- **Misinformation**

Understanding the Digital Landscape



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Negative impacts of digital transformation

- Human rights violations
- Unsustainable consumption
- E-waste generation
- Energy consumption
- Misinformation
- Digital divide (access, use, quality)

Understanding the Digital Landscape

https://dsgi.wiley.com/global-rankings/

- Digital skills gap: between the demand for digital skills and the capacity for policy makers to respond to the talent deficit and educational institutions to deliver the needed skills
- Education & training industry: should be the catalyst for digital skills adoption, but has the biggest digital skills gap: 45,6%
- South Africa: ranks #84 with a score of 4.4 (Singapore is highest ranking with a score of 7.8)

Understanding the Digital Landscape

Which Skills & Capabilities are needed?

Type of Roles	Functions
Computer scientists, system architects & engineers, data scientists, machine learning engineers, business intelligence developers etc.	• Building secure technology infrastructure, computer resources and data capacity • Developing models, tools and apps relevant to the African context • Data collection, processing and sharing
Ethicists, lawyers and governance specialists etc.	• Understand what the impact of AI innovations is on society and prepare adequate regulation and governance around it, ensuring that AI contributes to an inclusive society
Digital citizens (meaning all of us!)	• Aware of the technological culture in which we live • Know how it influences our lives • Have a say in the design and use of it.

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Are you a robot? Are you a human?

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Going Offline

- Digital detox
- Slow tech movement
- Rise of 'dumb' phones and offline retreats

Rediscovering Humanity

Enriching, Not Streamlining the Human Experience

Enriching technology:

- amplifies human values.
- fosters critical thinking, creativity, and connection.
- requires deliberate, thoughtful design, development & deployment choices.

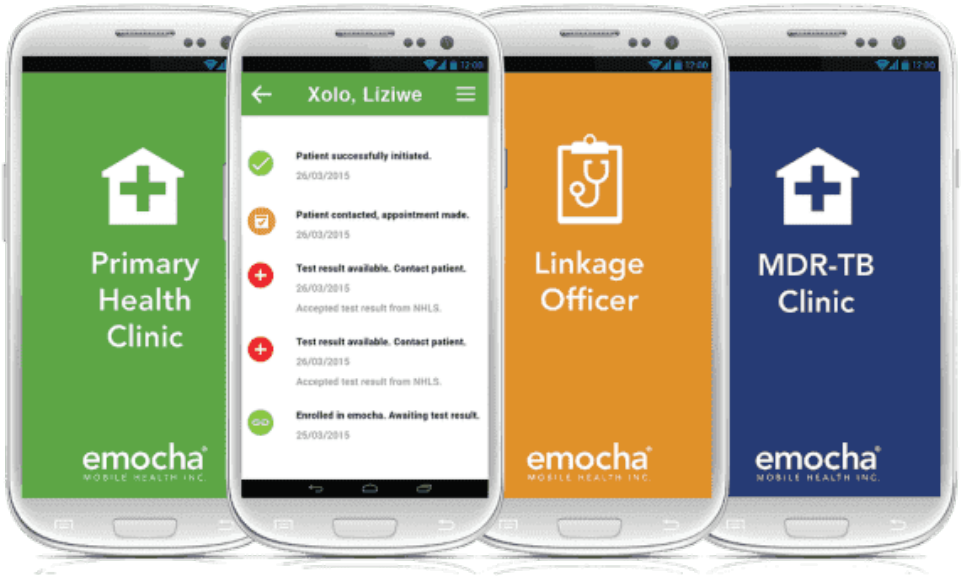
Opportunities: the African context

African innovations

m-pesa

Opportunities: the African context

African innovations



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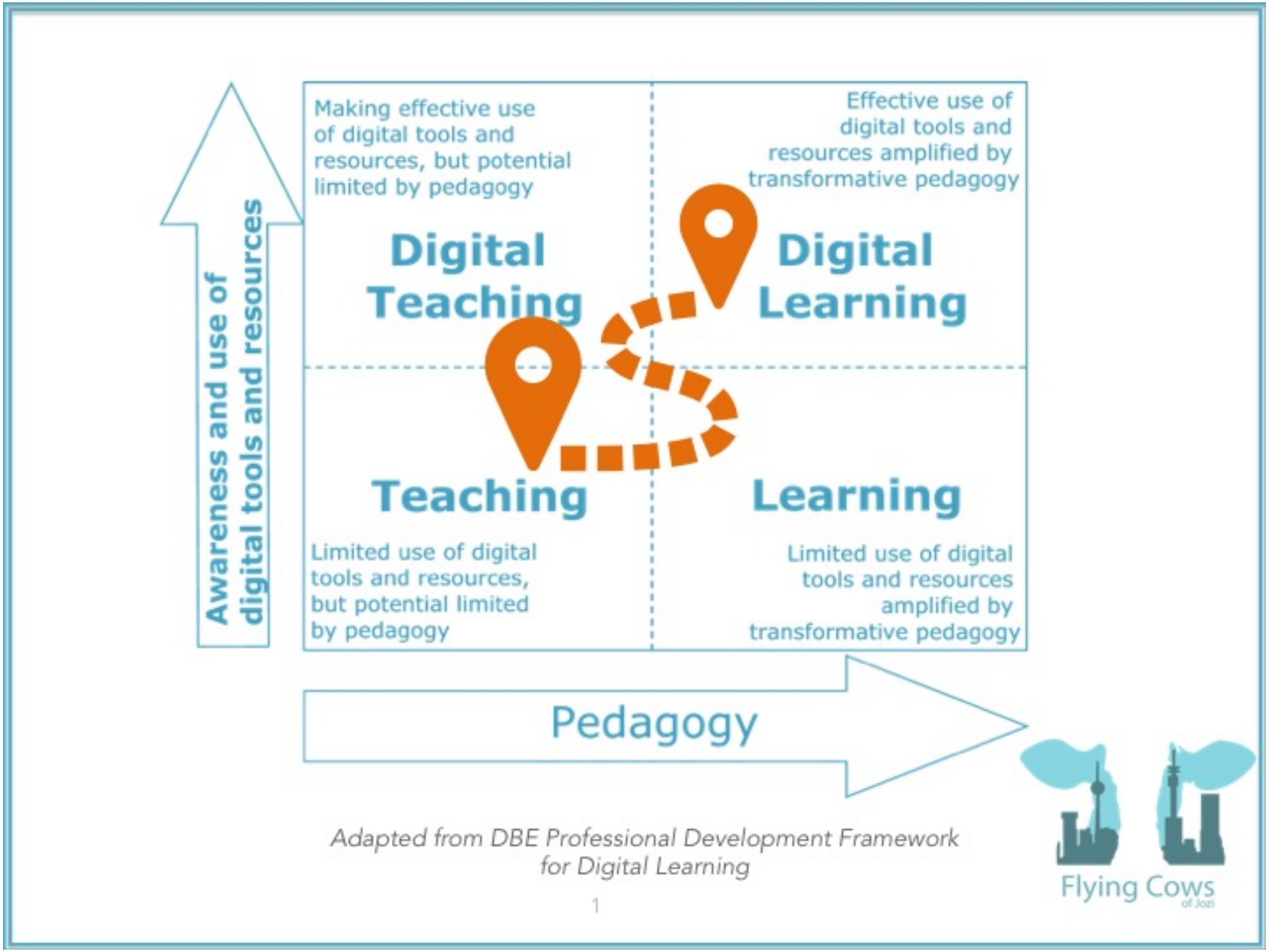
Opportunities: the African context

Our youth, the future

"There needs to be a skills revolution, focusing on communication, logical and numerical skills. These skills should create a critical mass of people who can code, think mathematically, think computationally, and have a holistic approach to problem-solving."

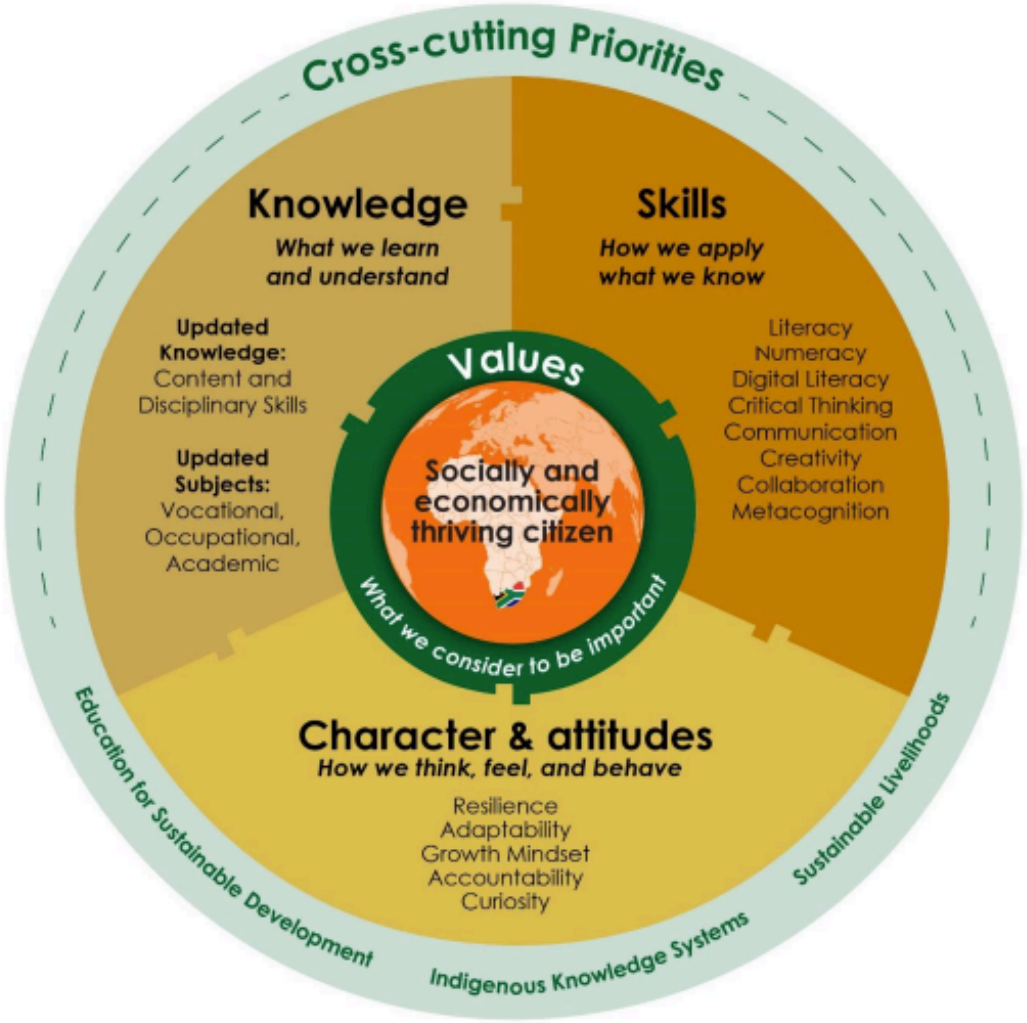
- Professor Tshilidzi Marwala

Our Leadership Challenge: Implementation!



Our Leadership Challenge: Implementation!

DBE Competency Framework



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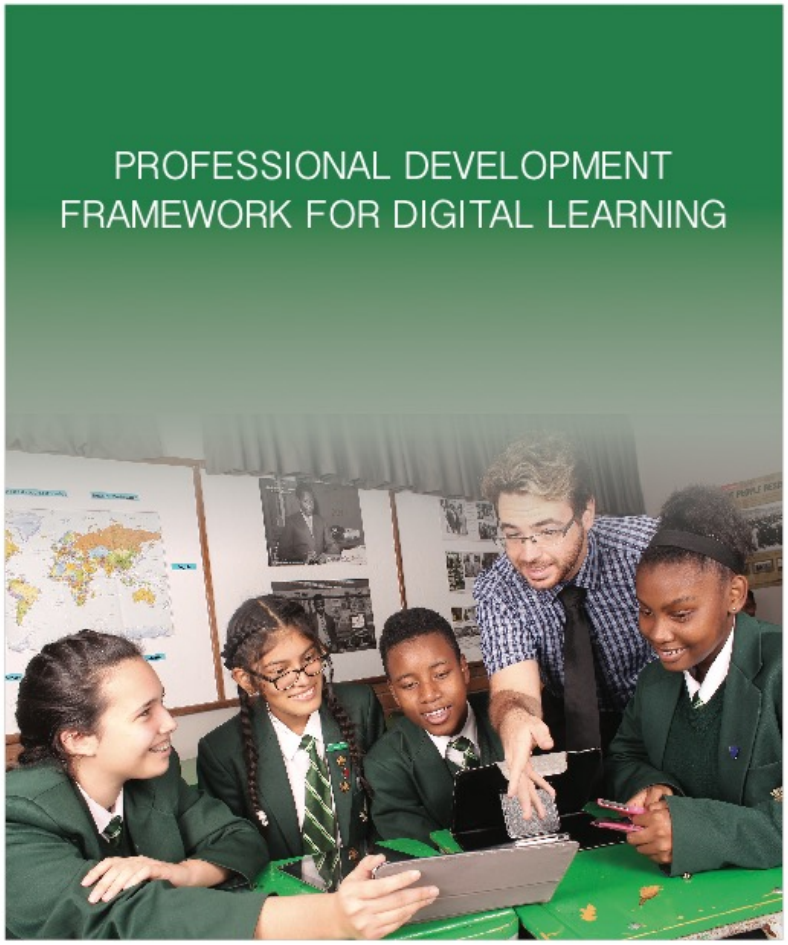
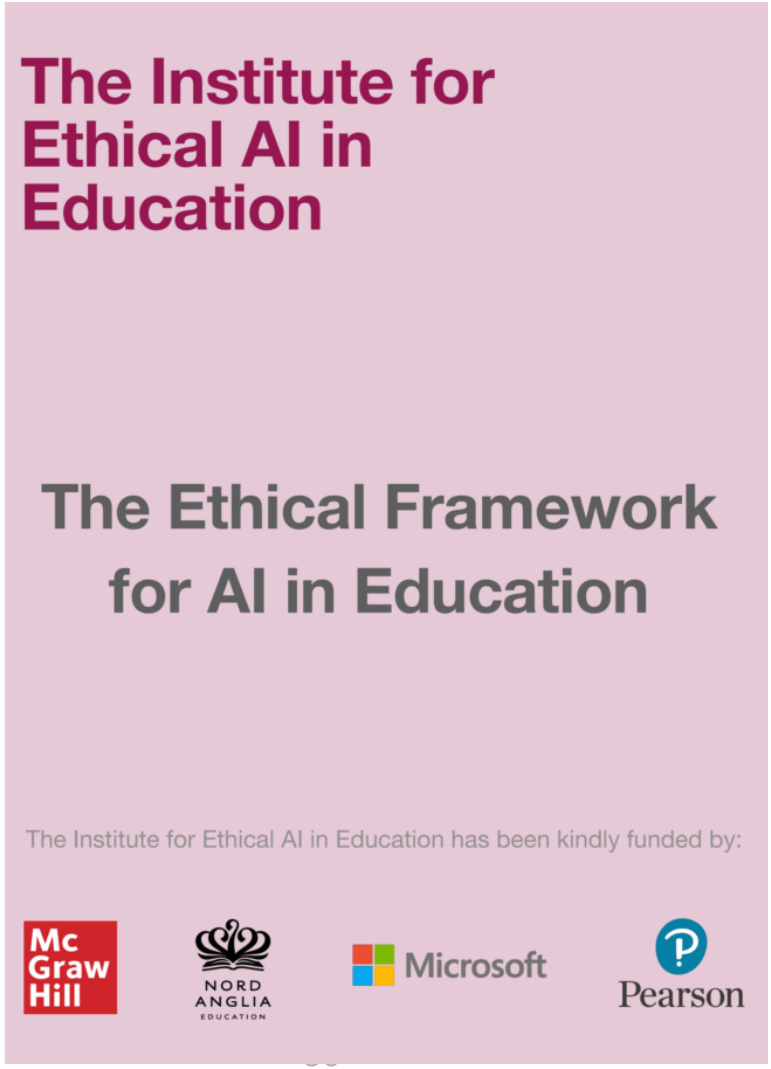


Our Leadership Challenge: Implementation!

Responsible & just AI procurement & implementation



Let's create a truly African future!

African Futurism

"African Futurism as a sub-category of **science fiction** that is directly rooted in African culture, history, mythology and point-of-view and does not privilege or centre the West, **is centred with optimistic visions in the future** and is written by (and centred on) people of African descent while rooted in the African continent. "

- Nnedi Okorafor

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