



RAi UK IA & IP Networking Event 12 March 2025 Royal Society, London



UK Research
and Innovation



For the FATES of Africa: A co-developed pipeline for responsible AI in online learning across Africa.

Dr. Nora McIntyre¹ & Mrs. Sarah Hawkes²

¹ Associate Professor in Education, University of Southampton UK

² Head of Operations, Whizz Education Ltd.

Project Presentation

RAi Consortium IAA IP Networking Day

Royal Society, London

12 March 2025



International Partnership: FATES of Africa

Talk overview

Our project experiences and insights

1. The problem of online learning
2. The response from the FATES of Africa project
3. Whizz Education: Our cross-country and cross-sector partner
4. Joint recommendations and next steps



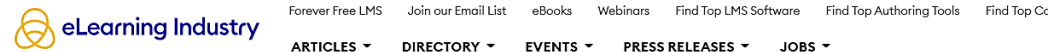
Nora McIntyre & Sarah Hawkes – Project talk, RAI Networking, March 2025
For the FATES of Africa: A co-developed pipeline for responsible AI in online learning across Africa.



International Partnership: FATES of Africa

1. The problem of online learning

Promises made



Summary: Gone are the days where students were only given the option of studying in person, forced to waste most of their day attending just a few classes. Now, with the increasing popularity and ease of eLearning, students no longer need to make arduous journeys to their classrooms and can instead find the model of learning that best suits them.

How The Ease Of eLearning Facilitates Education

The old tradition of sitting among other students in the impersonal setting of a classroom, coupled by the leer of a professor as students rush to copy down text-heavy slides is quickly becoming an obsolete form of learning. To the older generations, this may be a little frightening, but this form of learning has occurred for centuries in some way or another. The only difference being that instead of tablets and books, students now have access to far more resources through the recent medium which is modern technology; here is how the ease of eLearning helps to increase student engagement and improve learner retention.

Technology has now progressed to the point where students and professionals alike can store and manage almost all of their information online. Trends in setting up online portfolios, business sites, and Facebook pages have become the go-to learning spaces for students, and these trends have certainly been noticed by those in the education industry.

Promises broken



EQUITY, DIVERSITY AND INCLUSION

3 ways online learning can narrow the higher education and workforce gender gap

Jul 20, 2022



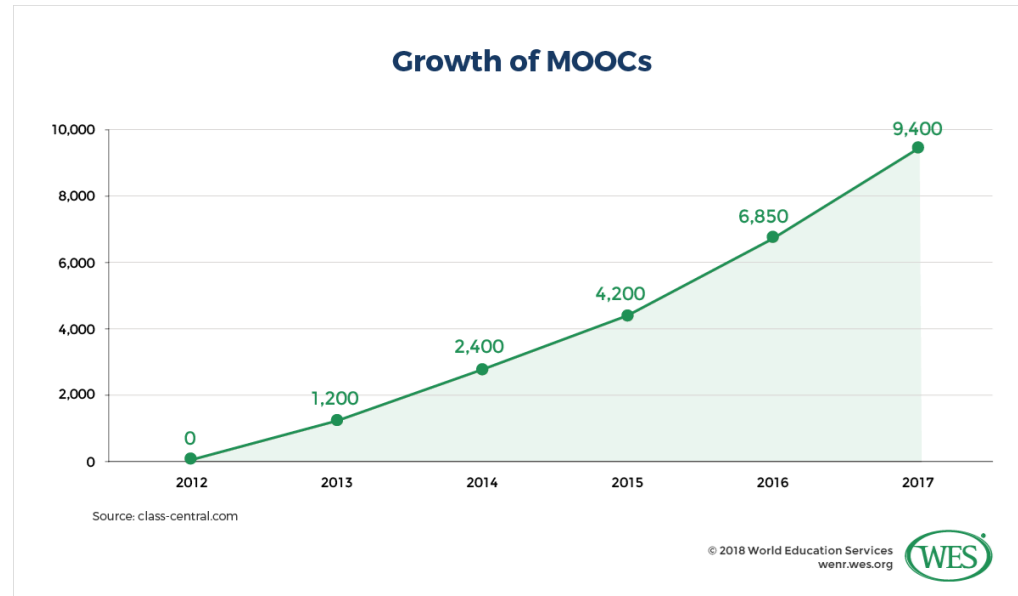
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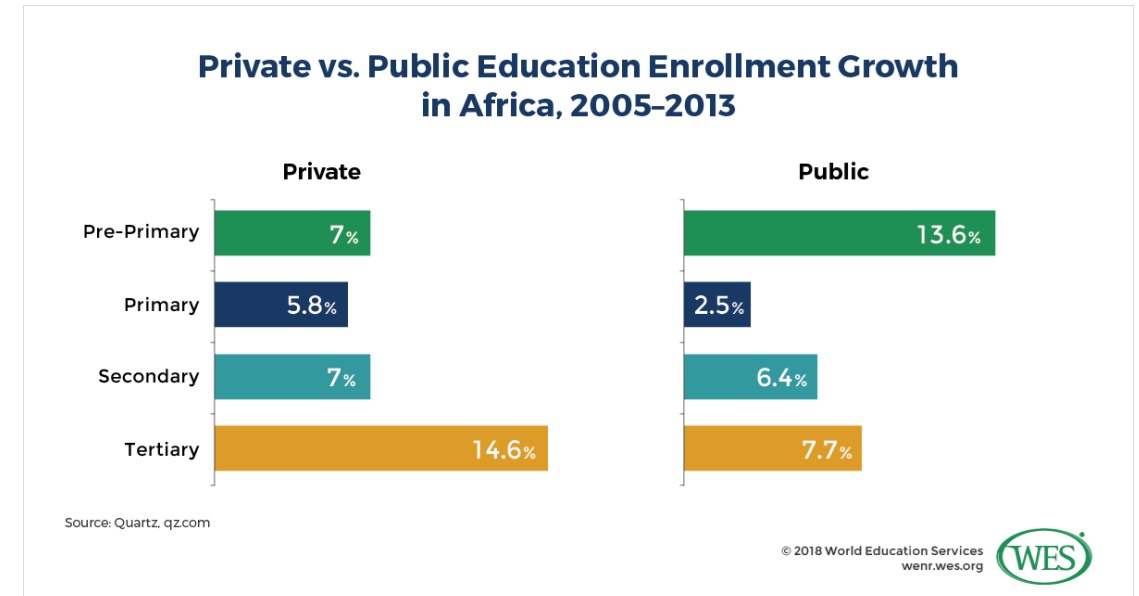
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1. The problem of online learning

Promises made



Promises broken



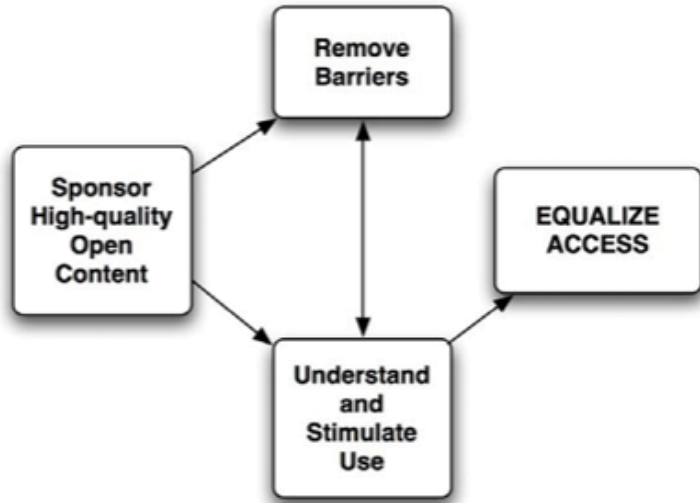
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1. The problem of online learning

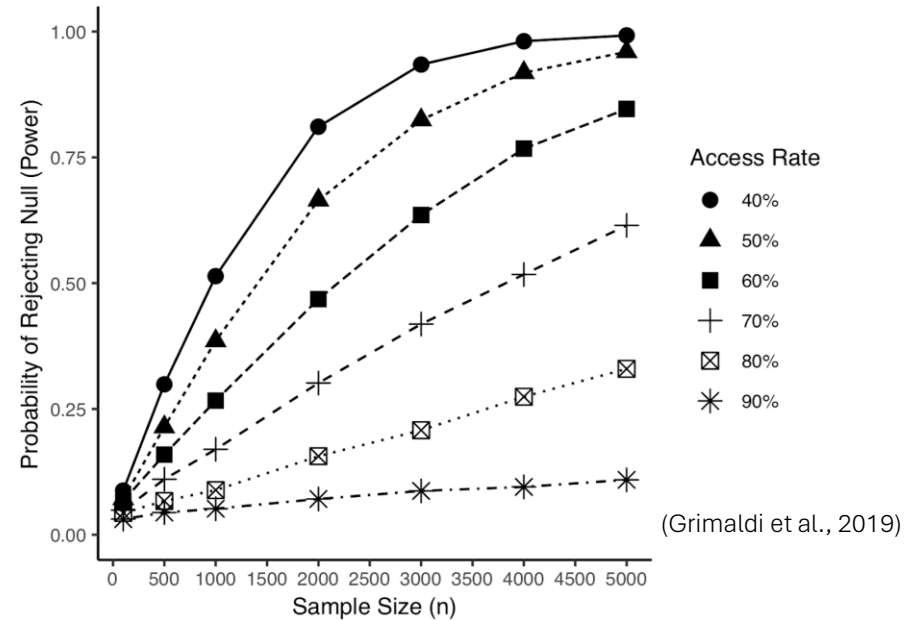
Promises made



(Atkins et al., 2007)

Figure 2—Current Open Educational Resources Logic Model

Promises broken



(Grimaldi et al., 2019)



International Partnership: FATES of Africa

1. The problem of online learning

Promises made

HOME / ARTIFICIAL INTELLIGENCE / Harnessing The Power Of AI In eLearning: Revolutionizing Education

Harnessing The Power Of AI In eLearning: Revolutionizing Education

Summary: Welcome to the future of education! As we navigate through a rapidly evolving digital landscape, it becomes more crucial than ever to harness the power of Artificial Intelligence (AI) in revolutionizing virtual learning.

Enhancing Engagement And Personalization With AI-Powered eLearning

Artificial Intelligence (AI) is one of the most transformational technologies of our time. With AI-powered eLearning, educators can personalize learning experiences for each student, providing

Promises... breaking

Open Access Opinion

Artificial Intelligence Alone Will Not Democratise Education: On Educational Inequality, Techno-Solutionism and Inclusive Tools

by Sahan Bulathwela ^{1,*} ✉, María Pérez-Ortiz ¹ ✉, Catherine Holloway ² ✉, Mutlu Cukurova ³ ✉ and John Shawe-Taylor ¹ ✉

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Sustainability **2024**, *16*(2), 781; <https://doi.org/10.3390/su16020781>



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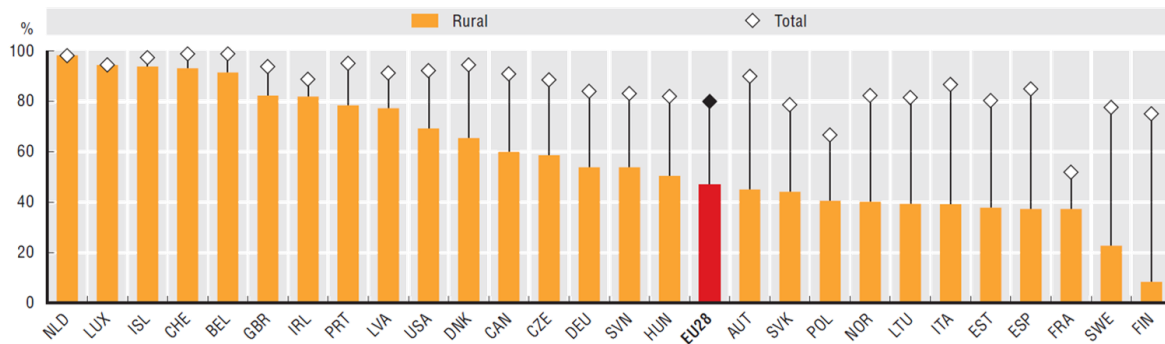


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1. The problem of online learning

Promises made, promises breaking

Households in areas where fixed broadband with a contracted speed of 30 Mbps or more is available, total and rural, 2017
As a percentage of households in each category



Source: OECD calculations based on CRTC, Communications Monitoring Report, 2017(Canada); EC, Study on Broadband Coverage in Europe 2017 (European Union) and FCC, 2018 Broadband Deployment Report (United States). See chapter notes.

StatLink <https://doi.org/10.1787/888933929718>

Predictions 2025: Accelerated Demand For AI-Powered Infrastructure And Operations

Michele Pelino, Principal Analyst OCT 22 2024
Naveen Chhabra, Principal Analyst

It's the onset of Forrester's Predictions season, and in 2025, we expect the normally slow-moving technology infrastructure space to see significant disruption, with changes driven by accelerated appetite for all things AI. Firms have sky-high expectations from AI, encouraging their investments to explore its potential in pilots and experimentation.



SEP 25 2024 DATA ANALYTICS

What Is AI-Capable Infrastructure? What Do Agencies Need to Know?

The CAIO Council is encouraging agencies to boost their computing power and resilience to pave the way for this emerging technology.

by Adam Stone
Adam Stone writes on technology trends from Annapolis, Md., with a focus on government IT, military and first-responder technologies.

▶ LISTEN 06:21

The federal CAIO Council is prioritizing artificial intelligence-capable infrastructure, with an emphasis on computing power and resilience, as agencies increasingly look to leverage the technology.

Agencies will likely need some major technology enhancements to operationalize their AI efforts, and given the government's intense interest in this area, it's worth taking a deeper look into what those entail.



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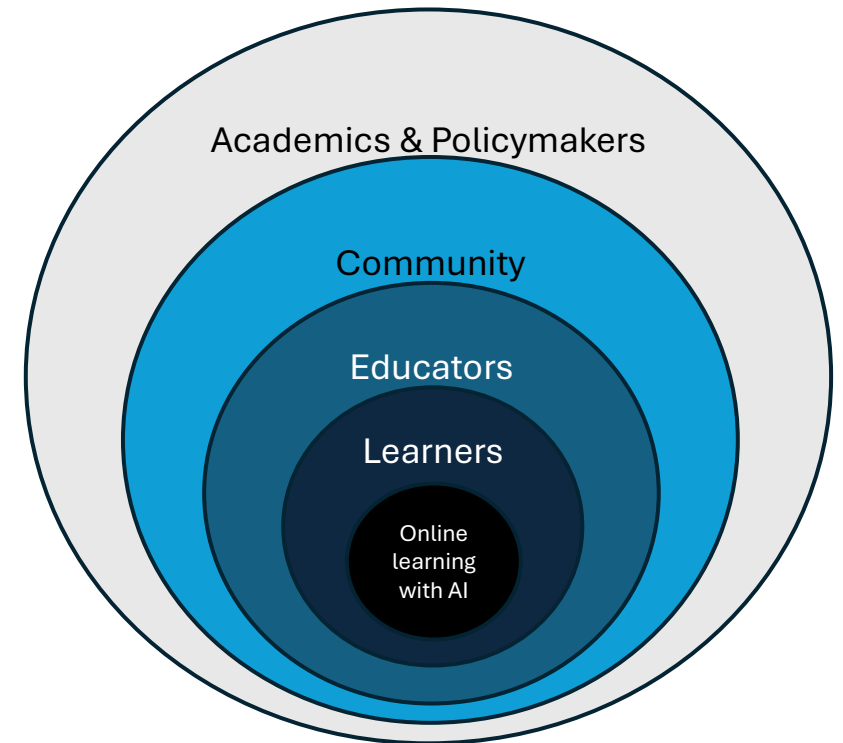
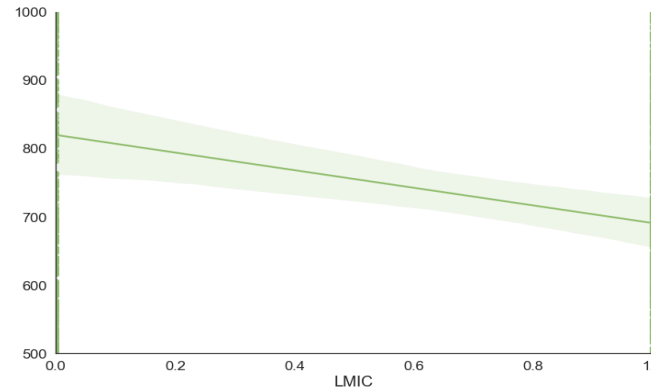
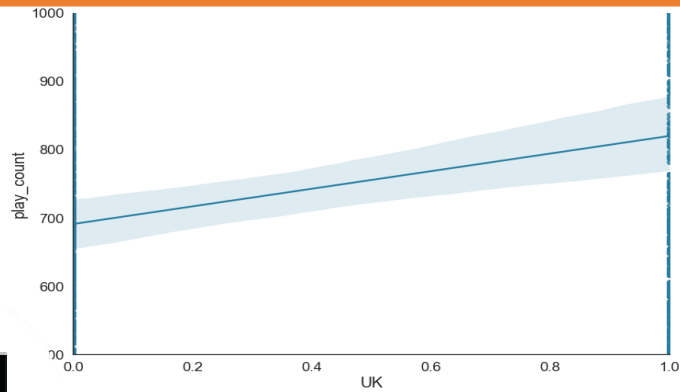
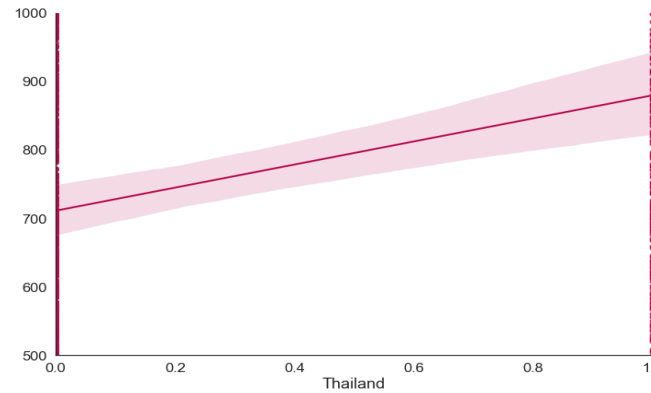
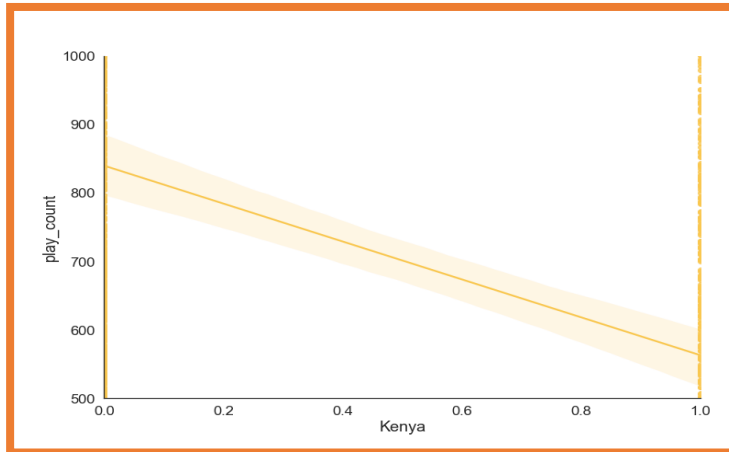
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1. The problem of online learning



...And promises never made.

Scan for the article →



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2. The response from this project

Actor-led consultations for Africa-led online learning with AI

1. A decolonial move away from cognitive imperialism and cultural hierarchy.
2. Actor leadership and involvement for their gift of knowledge.
3. Keeping aware of systemic nature of education and colonial impact.
4. A ground-up approach to consultations and knowledge generation.



International Partnership: FATES of Africa

3. Cross-country and cross-sector partnership

An Africa-strong international partnership for actor-led online learning with AI.

Our Team



Nora McIntyre
Principal Investigator

Nora is an Associate Professor of Education at University of Southampton.

Her research interests are in culture, socio-emotion, and inequalities. She particularly advocates the use of intensive data via innovative research technology and process-oriented analytic techniques.



Professor Sebastian Stein
Co-Investigator

Sebastian is a Professor within the Agents, Interaction and Complexity research group, School of Electronics and Computer Science at the University of Southampton.

His research interests include Citizen-Centric Artificial Intelligence Systems.



Professor Adèle Botha
Co-Investigator

Adèle is a Principal Researcher in next-generation mobile and information and communications technology (ICT) systems at the Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa.

Her research interests include the goal-orientated use of mobile cellular technology in a techno-social context.



Richard Marett
Co-Investigator

Richard is Co-founder and CEO of Whizz Education, an online learning technology company.

Richard has a BA and MA in Mathematics from Oxford University and over 20 years experience working with educational institutions to raise standards in mathematics learning.

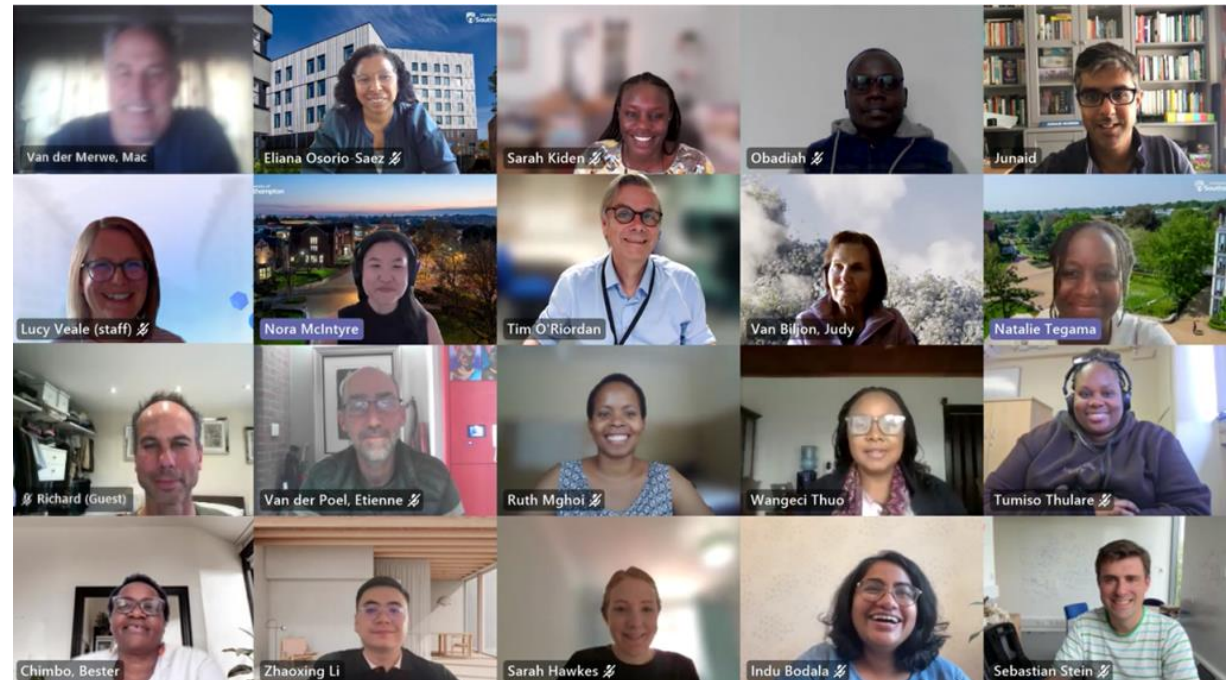


Professor Judy van Biljon
Co-Investigator

Judy is a Professor in the School of Computing at the University of South Africa.

Her research interests include innovation in the field of knowledge transfer through technology.

[Meet the full team](#)



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A close-up photograph of two hands reaching towards each other in a gesture of support or education. The hands are positioned in the center-right of the frame, with fingers slightly curled as if about to grasp or hold something. The lighting is soft and focused on the hands, creating a sense of depth and texture. The background is a dark, muted blue-grey color, which makes the hands stand out. The overall mood is one of care, guidance, and learning.

Whizz Education

Whizz Education



With over 20 years of experience, we implement innovative solutions that harness technology to deliver accelerated learning outcomes in numeracy, at scale, around the world.

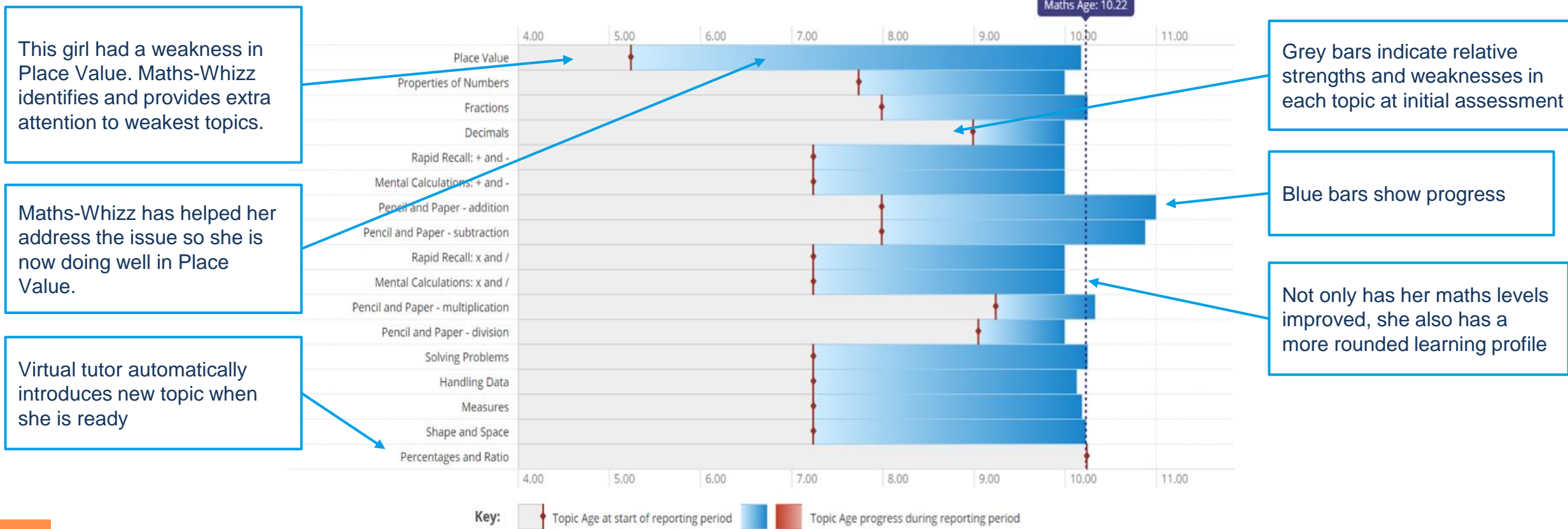
Deploying adaptive learning technologies, which leverage AI, to provide personalised learning experience and thereby democratise education.



Every child deserves a learning experience that caters to their individual needs and pace of learning



The Maths-Whizz virtual tutor uses adaptive learning technology and interactive lessons to simulate the behavior of a private tutor



This girl had a weakness in Place Value. Maths-Whizz identifies and provides extra attention to weakest topics.

Maths-Whizz has helped her address the issue so she is now doing well in Place Value.

Virtual tutor automatically introduces new topic when she is ready

Grey bars indicate relative strengths and weaknesses in each topic at initial assessment

Blue bars show progress

Not only has her maths levels improved, she also has a more rounded learning profile

Figure: An Individual Child's Learning Profile

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3. Cross-country and cross-sector partnership

An Africa-strong international partnership for actor-led online learning with AI.



Nora McIntyre • You

Associate Professor of Education at University of Southampton

4mo • 🌐

Having just returned from in-country research for the [RAi FATES of Africa](#) project ([Responsible Ai UK](#)), I am blown away by the phenomenal collaboration with [Whizz Education](#) Kenya led by [Catherine Wangeci Thuo, PhD](#).

Through the breath-taking initiative, resourcefulness, and dedication of the Whizz Kenya team, we were able to carry out hugely exciting consultations across the educational ecosystem within Kenya. We connected with learners, educators, community members, academics, and policy-makers who are affected directly by educational technologies, including online learning. It was especially rewarding to establish new connections and collaborations with the [University of Nairobi](#), especially [Andrew Mwaura Kahonge](#) and [Anne Aseey](#).

Thus, Kenya served powerfully as the 'engine room' of the project's vast undertaking to understand the priorities of the most affected actors in online learning across Sub-Saharan Africa.

East Africa has very much been well-represented by numerous in-person participants and collaborators in Kenya. Next up! We have remote consultations with Nigeria (West Africa) in partnership with [Stalwart Communities Africa](#), Cameroon (Central Africa) in partnership with [Teach Connect](#), and South Africa in partnership with [SchoolNet South Africa](#). And so the consultations across Sub-Saharan Africa continue!

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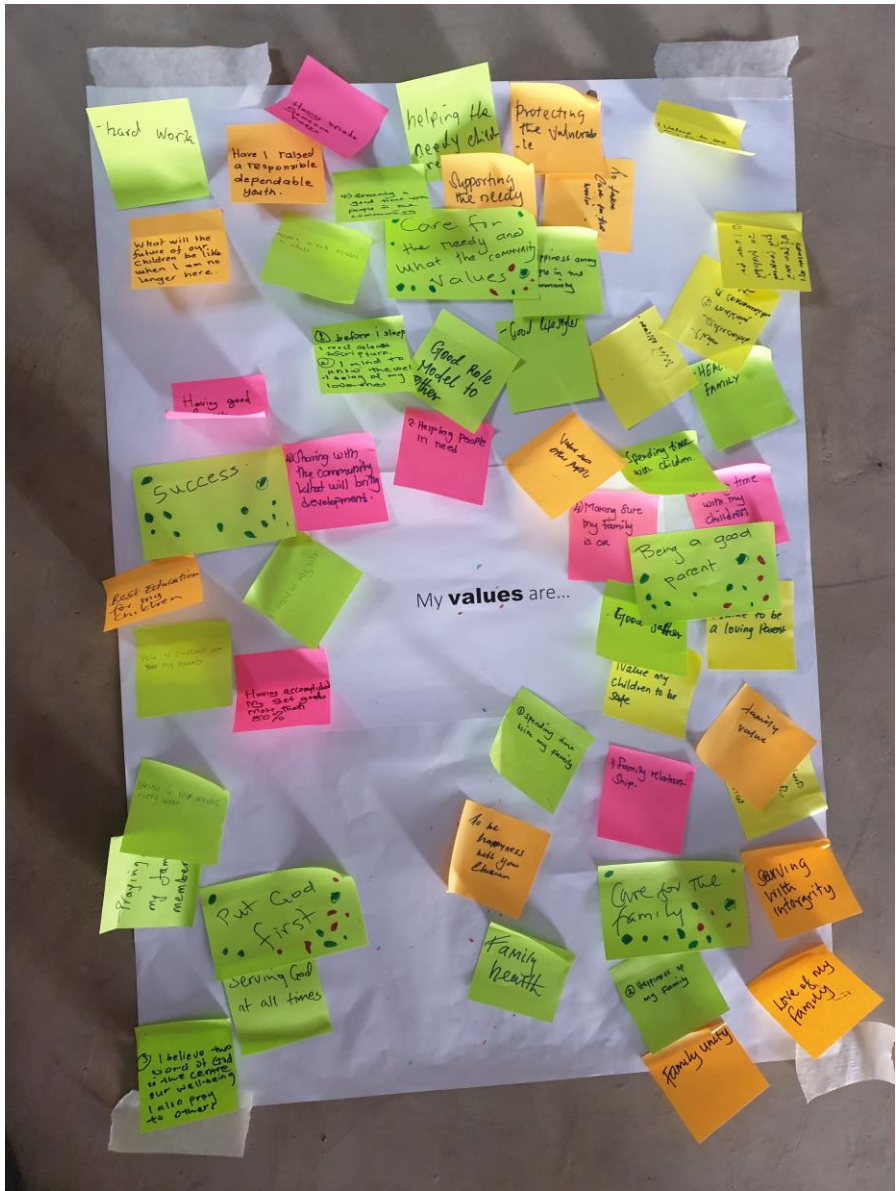
3. Cross-country and cross-sector partnership



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— Countries consulted in the FATES of Africa project



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4. Joint conclusions and next steps

Key areas in the ‘how-to’ pipeline for responsible AI in online learning

- **People-centred AI** – Plurality of voices for strengthened representation to redress historical inequities
Involving affected actors – Community involvement, continuous dialogue with stakeholders particularly end-users (schools and schools) than can inform futures paths in design, development and implementation.
- **Ethical AI deployment** – Data protection, child safety and ethics
- **Contextualisation** – Culturally responsive AI solutions, curriculum alignment, adaptability
Infrastructure development – Connectivity challenges, technological resources
Capacity building – Teacher training, skills for AI integration
- **Policy and governance** – Developing AI policies, aligning with international standards, influence decision making
Sustainable technological integration – Digital capability, technological maturity models

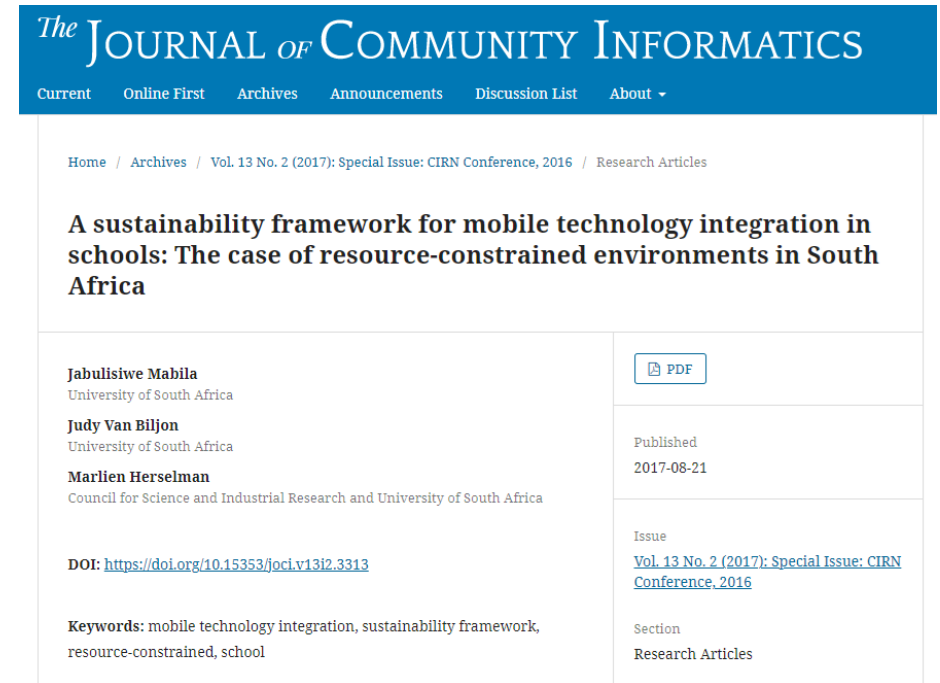


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4. Joint conclusions and next steps

Grounded analysis of cross-country consultations

- Sustainable framework for [mobile] technology integration (Mabila et al., 2017)
Economic | Technological | Political | Cultural | Pedagogical | Institutional | Environmental
- Design justice (Constanza-Chock, 2020)
- From TPACK to SJPACK (Dyches & Boyd, 2017)



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A sustainability framework for mobile technology integration in schools: The case of resource-constrained environments in South Africa

Jabulisiwe Mabila
University of South Africa

Judy Van Biljon
University of South Africa

Marlien Herselman
Council for Science and Industrial Research and University of South Africa

DOI: <https://doi.org/10.15353/joci.v13i2.3313>

Keywords: mobile technology integration, sustainability framework, resource-constrained, school

PDF

Published
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Issue
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Section
Research Articles



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4. Joint conclusions and next steps

What's next?

- March 2025: RAI FATES Panel at CIES Chicago
- June 2025: Toolkit development
- September 2025: Toolkit launch



The screenshot shows the CIES Session Submission Summary page. It includes a title "For the FATES of Africa: Socially-just ecosystems and life cycles in online learning for Sub-Saharan Africa.", a date and time "Wed, March 26, 1:15 to 2:30pm, Palmer House, Floor: 3rd Floor, Salon 4", and a group submission type "Formal Panel Session". An agenda is listed with 8 items, including session opening, papers, and a discussion.

Session Submission Summary

Share... Add to Personal Schedule

For the FATES of Africa: Socially-just ecosystems and life cycles in online learning for Sub-Saharan Africa.
Wed, March 26, 1:15 to 2:30pm, Palmer House, Floor: 3rd Floor, Salon 4

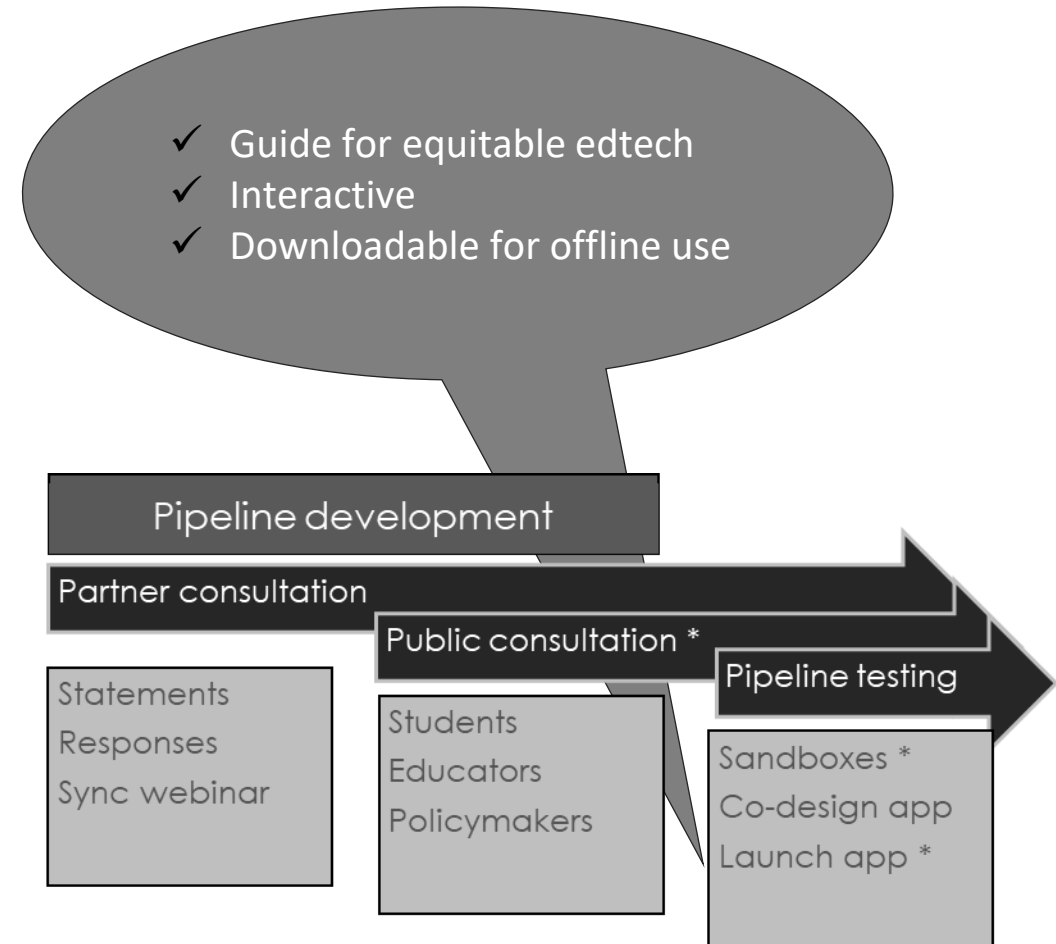
Group Submission Type: Formal Panel Session

Agenda – 75 minute in total:

1. Session opening - Chair (5 mins)
2. Paper - "A systematic consultation: Method and insights from an initial effort in defining decolonised and actor-led online learning for Africa" (10 mins)
3. Paper - "AI justice for social justice in LLM-powered online learning" (10 mins)
4. Paper - "A framework for multi-faceted digital development for online learning in East Africa" (10 mins)
5. Paper - "Re-imagining AIED as a decolonial tool: An Ethical framework for conducting equitable AI online learning research and design in Sub-Saharan Africa" (10 mins)
6. Paper - "Strengthening Kenyan teachers' preparedness to integrate artificial intelligence through co-development of a competence-based curriculum" (10 mins)
7. Discussion - "What we know, and what we need going forward, for a more equitable ecosystem for resource-constrained online learners in Sub-Saharan Africa" (10 mins)
8. Open discussion, Full participation across speakers and audience (10 mins)



Scan for CIES session



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THANK YOU!

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