Tackling coloniality in EdTech

Making your offering inclusive and socially just

Hosted by Ntombini Marrengane

Presented by Dr Taskeen Adam, Nariman Moustafa & Dr Moizza Binat Sarwar

29 June 2022

About this document

Recommended citation

Adam, T., Moustafa, N., & Sarwar, M. (2022). *Tackling coloniality in EdTech: Making your offering inclusive and socially just*. EdTech Hub. https://doi.org/10.53832/edtechhub.0150. Available at https://docs.edtechhub.org/lib/3QV8PAED. Available under Creative Commons Attribution 4.0 International, https://creativecommons.org/licenses/by/4.0/.

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Background

On 29 June 2022, Bertha Centre, EdTech Hub, Open Development & Education and the Overseas Development Institute (ODI) presented a workshop on Tackling Coloniality in EdTech. The workshop was hosted by Ntombini Marrengane (Bertha Institute), with thought-provoking presentations by Taskeen Adam (EdTech Hub), Nariman Moustafa (Open Development & Education), and Moizza Binat Sarwar (ODI).

This slide deck shares the resources and activities used at the workshop, in the hope that it inspires others to host similar workshops that critically reflect on how coloniality can be embedded in EdTech designs, projects, programmes, processes, structures, values, knowledge systems, and philosophies.

LIVE Webinar **TACKLING COLONIALITY IN EDTECH:**
Making your offering inclusive and socially just

At the Bertha Centre we work to understand, innovate and share knowledge in order to promote **equitable access to quality education**. In line with that goal, in our next Knowledge for Impact Seminar, we are delighted to partner with Dr Taskeen Adam, Nariman Moustafa and Dr Moizza Binat Sarwar to reflect on the role of the EdTech sector in quality education.

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Senior Research Lead at EdTech Hub

Nariman Moustafa
Senior Analyst at Open Development & Education

Dr Moizza Binat Sarwar
Research Fellow at Overseas Development Institute

Date: **Wednesday 29th June 2022** | Time: **14:30-16:00 SAST**

RSVP LINK

UNIVERSITY OF CAPE TOWN

- Bertha Centre's mission is to pursue social impact towards social justice in Africa
- First academic centre in Africa dedicated to advancing social innovation and entrepreneurship for social justice
- First MBA programme globally to integrate social innovation as a compulsory course
- Current portfolios: health, education, finance, climate justice, governance, and youth development.
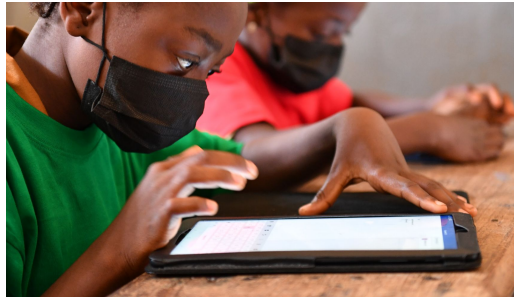
Strategic Priorities 2022–2025

- Increase the number of change-makers having systemic social impact
- Transform the way resources are used for social impact
- Work with partners to apply social innovation in a priority area
- Be at the forefront of social innovation thought leadership for social justice

Knowledge for Impact Series

Bertha Centre's Education Portfolio convenes multiple stakeholders along a **certain theme** once a quarter to disseminate the **latest research** and **gather lessons from implementers** to inform evidence-based decision-making in education for **greater impact and equality**.

Agenda

1. Introduction   5 min

2. ⭐*Why we are here*: Scene setting   5 min

3. What does decolonising EdTech mean?   10 min

4. ⭐*Reflection*: Reflecting on injustices in EdTech projects   5 min

5. Pitfalls in EdTech designs and implementations   15 min

6. ⭐*Breakout Groups*: How can we avoid reproducing injustices   30 min
in our EdTech designs?

7. ⭐*Sharing*: Sharing our guidelines   10 min

8. Pre-launch of EdTech Hub's New Entrepreneurship course   3 min

9. Wrap up   2 min

⭐ *= Activity*

⭐

Why we are here: Scene setting

⭐Ice breaker: Setting the scene

What questions are you bringing to this workshop?

*Type your answers in the chat box
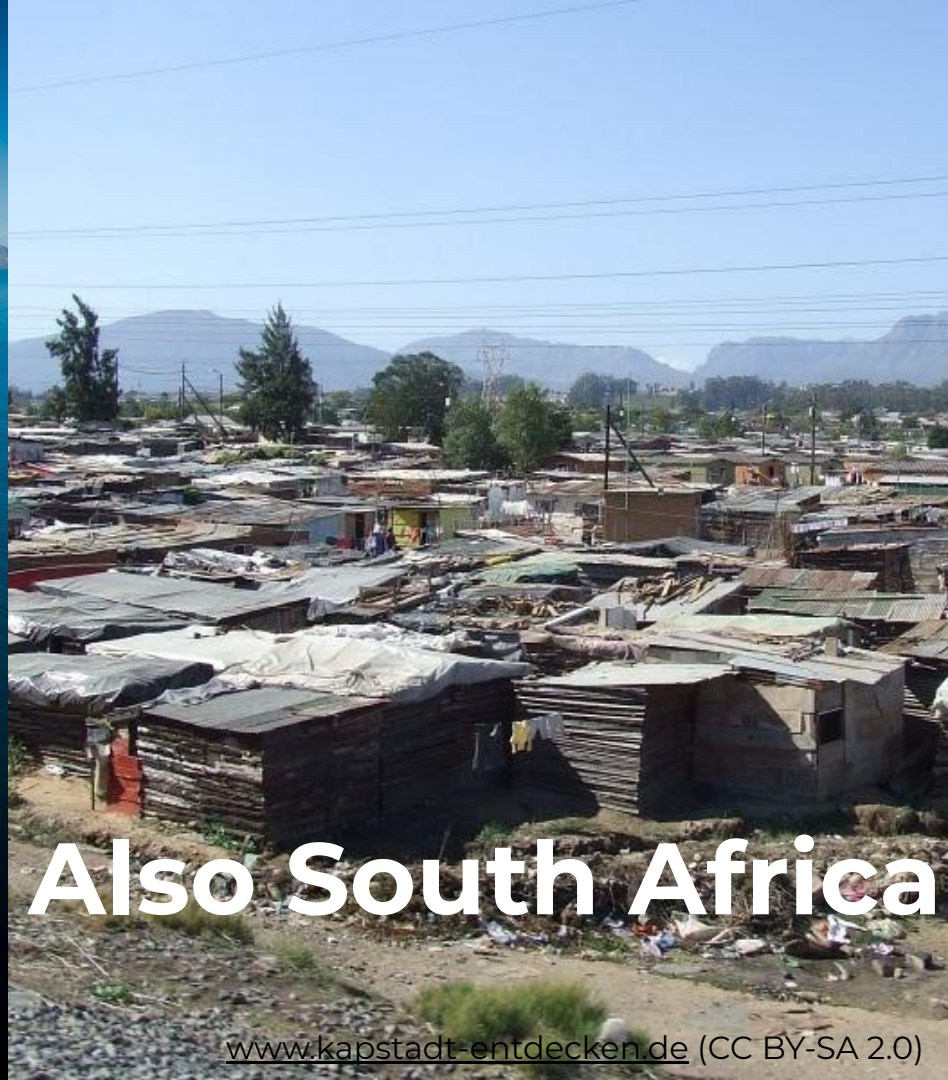or raise your hand to share verbally!*

What does decolonising EdTech mean?

South Africa

Also South Africa

CORONAVIRUS

Teachers trying to catch up, 'ticking boxes', overloading learners

Bongekile Macupe   2 Aug 2020

A classroom being decontaminated. File Picture: Themba Hadebe AP

Covid-19 claims lives of 12 teachers in Gauteng

OP-ED

Opening schools during Covid-19 is a pyrrhic victory — and teachers are the cannon fodder

By Sara Black and Ashley Visagie • 11 August 2020

OPINION

Towards a people's economics of education

Ashley Visagie   12 Aug 2020

Mail&Guardian
AFRICA'S BEST READ

CORONAVIRUS

Covid-19 pandemic highlights challenges of online teaching and learning

Francois Cleophas   6 Aug 2020

Opinionista • Nuraan Davids • 28 July 2020

Closing schools puts our children at far greater risk than keeping them open

Mail&Guardian
AFRICA'S BEST READ

CORONAVIRUS

Walter Sisulu University is playing catch-up with online learning

Bongekile Macupe   28 Jul 2020

Reopening of schools seems to be less about the teachers, parents a to rescue our failing and unsustainable capitalist economy

MEDIA STATEMENT: NO! TO JUST OPENING SCHOOLS. YES! TO OPENING SCHOOLS JUSTLY.

By Ryan Posted June 12, 2020 In C19PC Statements, Media Alert

Join PEOPLE'S COALITION

Get updates

Open or closed, South African schools need radical social change

Synchronous teaching methods?

Access to electricity

Online assessments?

Access to devices

Access to internet

Digital pedagogies?

Data costs

Video conferencing platform choices?

Lack of school feeding programmes

Imbalances in Open Education/MOOC production

89% of English Repositories of Open Educational Resources (OER) come from Europe and North America, with only 1% from Africa (Santos-Hermosa et al. 2017, p. 106).

Within the Massive Open Online Course (MOOC) sphere, only 1.7 % and 1.1% MOOC producers on Coursera and Futurelearn respectively, are black (Lockley, 2018, p. 150).

In 2017, only 164 of the 2,240 courses (7.3%) on Coursera were from the Global South (Adam, 2019).

Coloniality and Decoloniality

"Coloniality is different from colonialism. Colonialism denotes a political and economic relation in which the sovereignty of a nation or a people rests on the power of another nation, which makes such a nation an empire. Coloniality, instead, refers to **long-standing patterns of power** that emerged as a result of colonialism, but that **define culture, labour, intersubjectivity relations, and knowledge production** well beyond the strict limits of colonial administrations. Thus, coloniality survives colonialism. It is maintained **alive in books**, in the **criteria for academic performance**, in **cultural patterns**, in **common sense**, in the **self-image** of peoples, in **aspirations** of self, and so many other aspects of our modern experience."
(Maldonado-Torres, 2016)

Decoloniality involves "the dismantling of **relations of power** and **conceptions of knowledge** that foment the reproduction of **racial, gender**, and **geo-political hierarchies** that came into being or found new and more powerful forms of expression in the modern/colonial world."
(Maldonado-Torres 2016:440)

Decolonising education

Reclaiming identities, languages, cultures, heritages and lost humanities

Going beyond 'diversity' and 'transformation' to truly dismantle of power and privilege in education

Problematising the 'Eurocentric prisms' through which discourse is framed

Create spaces which deal with the emotional harm that schooling can cause to the oppressed through the negation and 'amputation' of parts of themselves

Create spaces where a plurality of voices, experiences, histories, epistemologies, and knowledges can be legitimised, claimed, and celebrated

Forefront educational approaches that awaken minds, promote critical consciousness and critical reflexivity

Dei and Simmons (2010), Makgoba and Seepe (2004), Fanon (1961), Freire (1970), Adam (2019)

Multiple meanings of decoloniality

Africanisation
- This is a **replacement** of European knowledges by local, indigenous knowledges.
- This stance allows for marginalised knowledges to be reclaimed but runs the risk of nativism or the co-option of local knowledges for political and national agendas.

Afrocentrism
- This decentres European knowledges and **recentres** local/indigenous knowledges.
- The process carries the risk of romanticising local and indigenous knowledges as infallible, when (as with all knowledges) marginalised knowledges are also fallible and open to deliberation.

Knowledge as entanglement
- This argues that knowledges are **entangled** and inseparable in a way that is not regional, but rather travelling across space, and evolving with time, thus no one region is the sole authority.
- The risk is that knowledges of the victors will feature more than marginalised knowledges.

Categories developed from Jansen (2017) and explanations built from Mamdani (2016), Hodgkinson-Williams and Trotter (2018), and Adam (2019)

Digital neo-colonialism

"The use of information technology and the internet by hegemonic powers as a means of **indirect control** or **influence over** a **marginalised group** or country" (Adam 2019).

| Hegemonic powers could be nation states, corporations, or institutions | Digital neo-colonialism could be a form of economic, social, or cultural hegemony | Promotes a technological understanding of being through privileging calculative thinking and technocracy | Similar concepts include cyber colonialism, data colonialism, techno-colonialism and techno-capitalism |

Colonial elements in EdTech

Globalising education — EdTech platforms that position themselves as global or universal but promote dominant knowledges (mostly White, Western-centric), values, norms, beliefs, and languages to the detriment of those from marginal, non-dominant, local and indigenous groups.

Western epistemological and pedagogical underpinnings — Promote rationalistic, secular, universal, objectivist, modernist, written, behaviourist, and individualistic ways of being and marginalise spiritual, ancestral, oral, subjective, critical, and communitarian ways of being.

Dominant languages — Dominant languages used to achieve product scaling lead to the loss of the conceptual frameworks used by minority languages.

"Core-to-periphery" implementation — Products can promote a predominantly one-way transmission of standardised knowledge from Western countries to a diverse, complex pool of 'awaiting' participants globally.

Colonial logic and bias in algorithms — Technical designs can overlook who creates EdTech products, who it is designed for, and the embeddedness of colonial logics within the design

Adverse incorporation — Young learners' thoughts and experiences are tracked and monitored, giving them a lifelong digital footprint. They do not realise what they are signing up for.

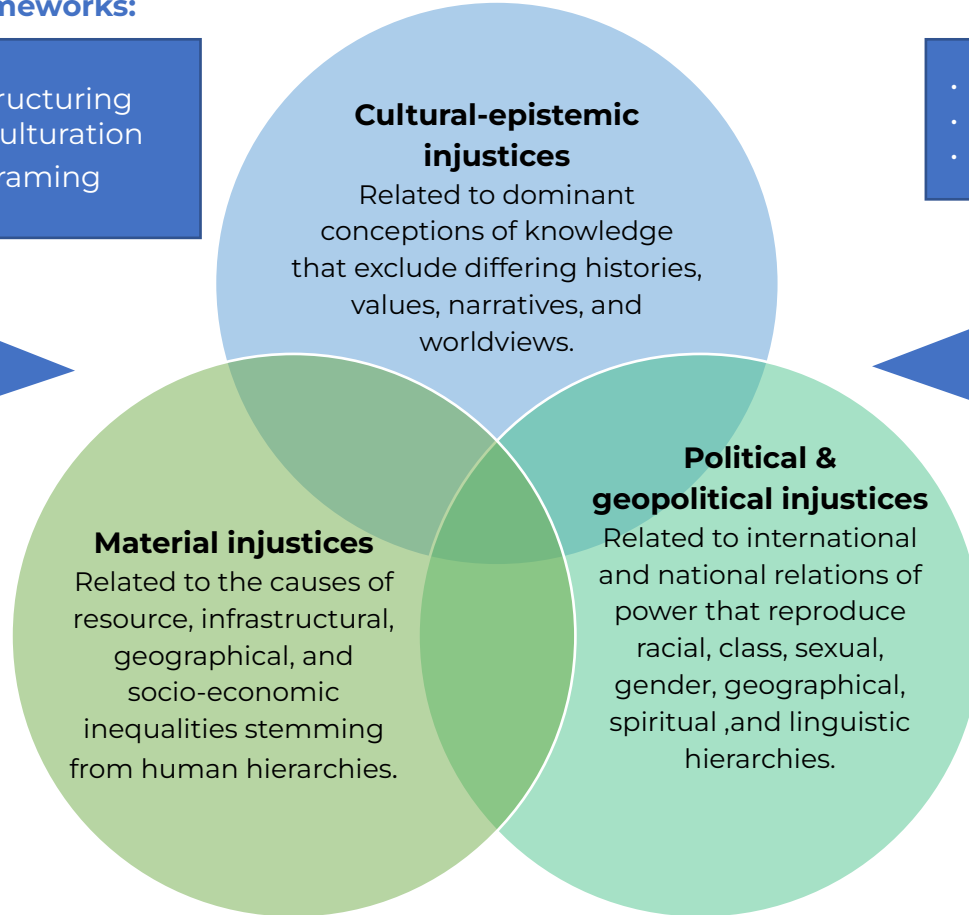# Dimensions of Human Injustice

Social Justice Frameworks:

- Redistribution/Restructuring
- Recognition/Re-acculturation
- Representation/Reframing

Decoloniality:

- Coloniality of being
- Coloniality of knowledge
- Coloniality of power

Social Justice lens built from the works of Rawls (1971), Fraser (2005), Young (1997), Lambert (2018), Luckett & Shay (2017), Hodgkinson-Williams, and Trotter (2018).

Decolonial lens built from the works of Maldonado-Torres (2016), Grosfoguel (2007), and Ndlovu-Gatsheni (2015).

Cultural-epistemic injustices
Related to dominant conceptions of knowledge that exclude differing histories, values, narratives, and worldviews.

Material injustices
Related to the causes of resource, infrastructural, geographical, and socio-economic inequalities stemming from human hierarchies.

Political & geopolitical injustices
Related to international and national relations of power that reproduce racial, class, sexual, gender, geographical, spiritual ,and linguistic hierarchies.
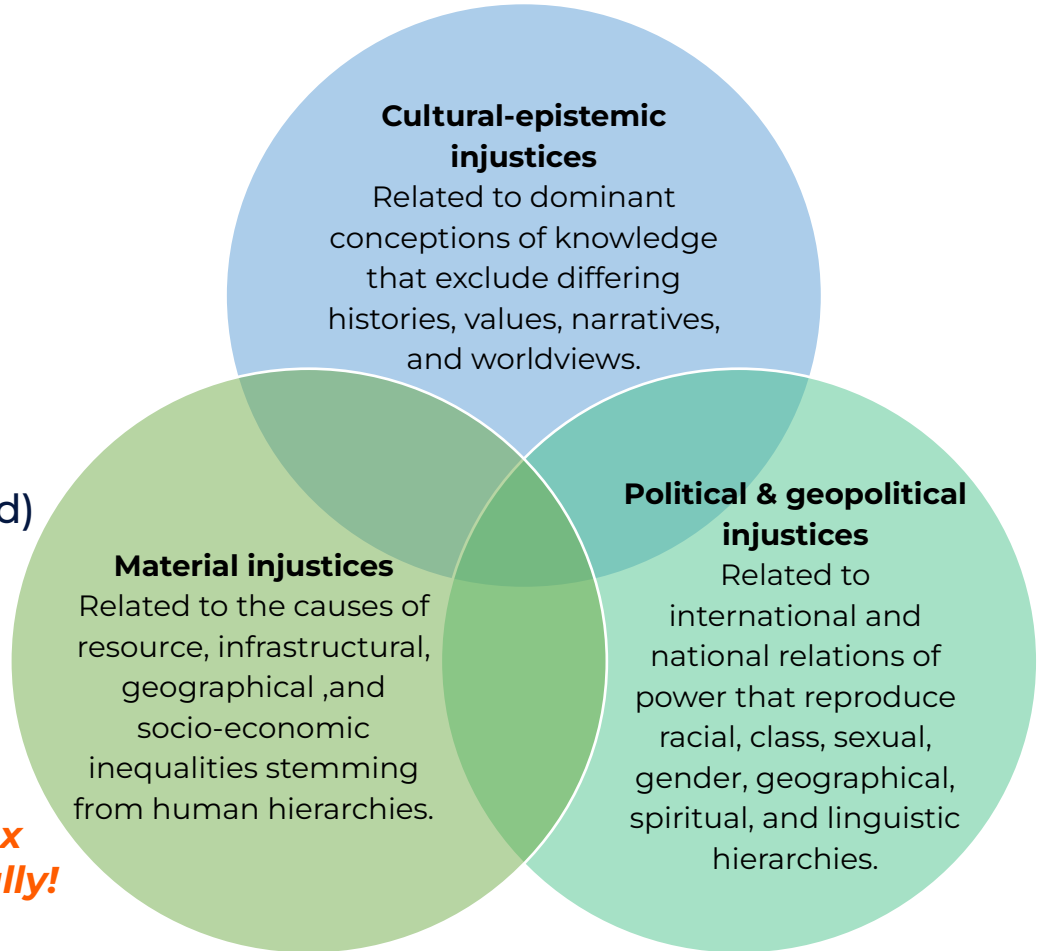
⭐ **Reflection: Injustices in our EdTech projects**

⭐ **Reflection**

?

What material, political, and epistemic (knowledge-based) injustices may be present in your educational offering?

Type your answers in the chat box or raise your hand to share verbally!

Cultural-epistemic injustices
Related to dominant conceptions of knowledge that exclude differing histories, values, narratives, and worldviews.

Political & geopolitical injustices
Related to international and national relations of power that reproduce racial, class, sexual, gender, geographical, spiritual, and linguistic hierarchies.

Material injustices
Related to the causes of resource, infrastructural, geographical ,and socio-economic inequalities stemming from human hierarchies.

Pitfalls in EdTech designs and implementations

5 Pitfalls in EdTech designs

How can EdTech designs, products, and implementations assist in replicating features of colonial power and extraction?

Coloniality in assumptions and worldviews

1. **"Technology is the key to fixing the broken education system."**

2. **"Journeying through a learning pathway to a predetermined goal addresses educational needs."**

Coloniality in design processes

3. **EdTech designers are often a homogenous group catering to diverse students.**

4. **Algorithms can be biased with hidden logic.**

Coloniality through extractive processes

5. **Opting out of data collection is often a false choice.**

① Technology is the key to fixing the broken education system

Assumption:

> By **investing in more hardware and software,** we can rescue education from crises.

Pitfall:

> Without addressing historical and present-day **systemic injustices** that limit education systems from functioning better, **EdTech solutions will only be a sticking plaster.**

Consequence:

> 'Shiny' EdTech solutions take away focus and funding from addressing **underlying inequalities in education.**

> *Does your educational offering assume the main barrier to improving education is lack of device penetration?*

2 Journeying through a learning pathway to a predetermined goal addresses educational needs

Assumption:

Using theories of **behaviourism (i.e. rewarding correct performance)**, learning outcomes will improve, addressing students' educational needs.

Pitfall:

EdTech offerings often **do not develop critical thinking, analytical skills, social learning, socio-emotional skills** that are needed for holistic development.

Consequence:

Behaviourism promotes **conformity** to the status quo and overlooks that **education is inherently political**.

What pedagogical underpinnings are embedded in your educational offering?

Different digital pedagogies

Instructivist Approaches

- This teacher-centred approach uses a **unidirectional approach** to deliver content and information to students.
- This would be done through live or recorded lectures.

Cognitive Constructivist ApproacheS

- Students independently **construct their own knowledge** through activities and reflection and are actively involved in their learning and meaning-making process.
- This **inquiry-based learning** can be done through provocations and scenario-based learning.

Social Constructivist Approaches

- Meaning is constructed through **interaction with others and the environment**. This participant-centred approach emphasises **social learning, experience-sharing, and collaboration**.
- This can be achieved through breakout sessions, group projects, or peer assessments.

Socratic Approaches

- Learning is acquired through an **exchange of ideas and viewpoints.** Participants are not dictated the truth/answer nor expected to unquestioningly embrace their teacher's understanding.
- This is done through discussion, debate, and role-play.

Liberationist Approaches

- This approach builds a **critical consciousness** to transform relations of power which are oppressive. This approach **empowers students** to become **teachers of their teachers** through a dialogical and reflective process. This can be done through reflection exercises, storytelling, and student-led teaching.

Connectivist Approaches

- Connectivist approaches aim to utilise **social networking technologies** and view the participant as part of **a chaotic, complex, and distributed network**.
- This can be done through social media platforms, blogs, exchange programmes, etc.

3 EdTech designers are often a homogenous group catering to diverse students

Pitfall:

Personnel who **create EdTech designs** and who **curate the content** are often a **homogenous group of experts** trained in the same worldviews (often regardless of their country of origin), belonging, and working out of, institutions wedded to niche bits of knowledge that are **Western-centric**.

Consequence:

The users of EdTech offerings are often underrepresented in the creator group, particularly in conceptualising, design, and development stages.

Do you engage the users in product conceptualisation, design ,and development (i.e. beyond product user-testing)?

(4) Algorithms can be biased with hidden logic

Pitfall:

- EdTech products often use **proprietary software** and/or algorithms, so key stakeholders who deliver and experience these products **do not get to see how the software learns and adapts.**
- AI algorithms depending on data sets can **exhibit bias** and **perpetuate stereotypes**. Developers may not even understand the **'black box'** decisions taken by AI algorithms.

Consequence:

The limited rights and agency given by EdTech companies to implementers and actual users of EdTech (students, teachers, parents) replicates colonial relationships of subservience and control over knowledge.

Are your learning materials, platform design, and algorithms made open in a way that is accessible and understandable to the end-user?

(5) Opting out of data collection is often a false choice

Pitfall:

To access EdTech products, students may have to allow **their personal data to be used** by the software in line with the creator's own policies, which are often not up for negotiation by the student.

Consequence:

Lack of alternative and high-quality systems of education for marginalised learners means that opting **out of data collection is a false choice.** Learners thus 'sell' their data to access education.

What user data is captured and used in your EdTech offering? Can users opt out of data collection and still benefit from the platform?

⭐

Breakout Session: Developing guidelines on addressing injustice in EdTech Designs

⭐Break out sessions

- Each of the following slides has one main question prompt and some sub-questions
- You do not have to answer every question. You are welcome to share what is relevant to you
- The general guideline is to spend 10 minutes on every slide. However, feel free to adapt accordingly to your group's needs
- Please assign a notetaker who takes notes of main discussion points.
- Please share your personal experiences. This is an invitation to hold a brave space
- Please choose a presenter to share a 2-minute feedback in the plenary. The feedback can share highlights and recommendations from your conversation, particularly on the third reflection exercise.

Reflections on your EdTech designs

How can EdTech designs, products, and implementations avoid replicating features of colonial power and extraction?

Coloniality in assumptions and worldviews

Main Q: What is your offering trying to solve? What is the root cause of this problem on a systemic level? If you are an educator, what do you think the EdTech solutions in your institution are trying to solve?

Sub questions:
- What is the purpose of your design/intervention/change?
- What are the underlying philosophical assumptions behind your intervention?
- How does it address or enforce any of the levels of human injustices we spoke about during the plenary?

Reflections on your EdTech designs

How can EdTech designs, products, and implementations avoid replicating features of colonial power and extraction?

Coloniality in design processes

Main Q: Who is on your curriculum/experience design team? Who programs your algorithms? What different or similar identities do they hold? What do they value in education?

Sub-questions:
- What biases do you think exist in your design and technical programming team?
- Which mode of learning is your design biased towards?
- What opportunities for critical reflection, particularly on biases, are built into your team design process?

Reflections on your EdTech designs

How can EdTech designs, products, and implementations avoid replicating features of colonial power and extraction?

Decolonial possibilities

Main Q: Where can you seek alternatives to create decolonial EdTech solutions?

Sub-questions:
- Pedagogy: How varied are your pedagogy, content, and assessments to fit the needs of all learners?
- Content: Whose voices/authors/environments/histories/visions of futures are represented, and which are missing in your content?
- Content: How is your design embedded (or not) in the place and the context of your target group?
- Process: Who makes decisions around your EdTech solution? Whose voices are missing and need to be included?

⭐

Feedback:
Sharing our guidelines

EdTech Hub's Entrepreneur course

A new course for SSA EdTech entrepreneurs

FOUNDATIONAL LITERACY & NUMERACY

1 The Science of Teaching & Learning
- Key cognitive processes and concepts that inform learning and their implications.
- Specific strategies that teachers can apply to optimise transmission and embedding of knowledge.
- Myths and misconceptions about learning.

2 Foundational Literacy Basics
- Cognitive processess, frameworks, and strategies involved in learning to read for comprehension.
- Examples of foundational literacy teaching and learning practice, within the context of Sub - Saharan Africa. What works, and what doesn't.

3 Foundational Numeracy Basics
- Cognitive processess, skills and tools required to comprehend key mathematical ideas.
- Examples of foundational numeracy teaching and learning practice, within the context of Sub - Saharan Africa. What works, and what doesn't.

4 Teaching & Learning with Technology
- Defining technology within the context of EdTech.
- Examples of how to leverage technology to enable learning that is rooted in sound pedagogy.
- Accessibility considerations in the digitisation of learning practice.

5 Gender, technology & equal opportunity
- Explain how to use technology effectively to support gender-equity and social inclusion in different learning contexts.

PRODUCT DESIGN

1 The problem definition
- Overview of the product design cycle.
- Defining your problem statement.
- Conduct market scanning and compile a competitor analysis.

2 Product Stakeholders
- The difference between users and clients, and stakeholders.
- What is user-centric design?
- How to conduct ethical research.
- Reseach and create target.
- Develop a stakeholder map.

3 Theory of Change
- What is Theory of Change?
- Why do you need to design with impact in mind?
- Construct a Theory of Change for your product.

4 Product Refinement
- Defining and strengthening your MVP.
- Product self-evaluation.

SCALING YOUR PRODUCT

1 Business models for sustainability
- How do you build a business that will last?
- Different types of business models.
- Which business model is right for your business?
- Complete a business model canvas.

2 Investment readiness
- Different styles of investment options available.
- Assessing where your product is in the product development lifecycle and choosing the right investment.
- What do investors look for?

3 Your Product Pitch Deck
- Consider your learnings from all three modules.
- Finalise your product pitch deck.
- Present your pitch deck and stand the chance to qualify for a micro-grant.

4 Next steps
- Where to from here?
- Access to networks, communities of practice, accelerator and incubator programmes.

PEER REVIEW FEEDBACK

SUPPORT FROM EXPERT COACHES IN 1:1 SESSIONS

LIVE MASTERCLASSES WITH INDUSTRY HEAVYWEIGHTS AND FELLOW ENTREPRENEURS

MODULE 1: WEEK 1 - 2 | **MODULE 2: WEEK 3 - 4** | **MODULE 3: WEEK 5 - 6**

Resources

Resources

Blogs:
- Blog 1: Decolonising EdTech: A resource list for tackling coloniality and digital neocolonialism in EdTech
- Blog 2: Decolonising Open Educational Resources (OER): Why the focus on 'open' and 'access' is not enough for the EdTech revolution
- Blog 3: Reading Audrey Watters: A reflection on personalised learning via education technology through a decolonial lens

Zotero library:
- View the Decolonising EdTech Zotero community library
- Join the Decolonising EdTech Zotero community library

Other resources:
- Recorded Webinar to Emerge Africa: Decolonising Learning Design
- MYFest slide deck: Decolonising OER - Ethics, Equity, Epistemology and Power

Thank you!
Want to connect with us?

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