

Designing for Social Justice: A Decolonial Exploration of How to Develop EdTech for Refugees

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S1. Definitions

Decoloniality: “the dismantling of relations of power and conceptions of knowledge that foment the reproduction of racial, gender, and geopolitical hierarchies that came into being or found new and more powerful forms of expression in the modern/colonial world.” [8] (p. 440).

Digital neocolonialism: “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” [16].

Displaced person: While displaced people often flee their homes for similar reasons to refugees, they are either unable or unwilling to cross an international border. This means that they are not considered refugees and, therefore, legally remain under the protection of their own government [94].

Global North, Global South. These terms are used in cases where there is a need to emphasise during the discussion the privilege present within some groups, and the marginalisation of others. Rather than encompassing a particular geographical space, these terms mark “a shift from a central focus on development or cultural difference toward an emphasis on geopolitical relations of power” [95].

Low- and middle-income countries (LMICs). Low-income economies are defined by the World Bank as those with a gross national income (GNI) per capita of \$1,085 or less in 2021; lower middle-income economies are those with a GNI per capita between \$1,086 and \$4,255 [96]. We choose to use the term ‘LMICs’ as it works as an economic descriptor.

Refugee: The UNHCR’s definition of a refugee is, “someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.” [74]. It is important to note for the purposes of this paper, especially in relation to the Pakistan context, that refugees may be forced to flee, then return, then flee again, perhaps multiple times. In addition, even those who have lived for most or all of their lives in the host country may still be considered refugees in cases where they continue to experience conditions similar to those who have been displaced more recently, i.e. ongoing exclusion from host country support mechanisms. We also recognise that country borders are not universally accepted, and have separated historical communities and peoples when drawn up.

The West. We use this term throughout the paper to denote “Europe, as well as any countries whose cultures are strongly influenced by European values or whose populations include many people descended from European colonists” [98], for example, the United States of America. In the context of this paper, we therefore use the terms ‘western’ or ‘western-centric’ in association with design approaches, pedagogies and epistemologies originating in European thought.

Youth, young people: “the operational definition and nuances of the term ‘youth’ vary from country to country, depending on relative sociocultural, institutional, economic and political factors” [97]. While the UN usually defines ‘youth’ as being between the ages of 15 and 24 for statistical purposes, some UN entities consider that youth can last until the age of 35, and that “youth perhaps changes with circumstances” [97]. In the case of refugees, who can be considered to have lost periods of their youth to displacement, this flexibility of definition may be especially relevant.

S2. Provincial snapshots in Pakistan

Khyber Pakhtunkhwa

Khyber Pakhtunkhwa (KP) has the highest percentage of Internet access (37%) amongst all provinces [71]. While it has fewer out-of-school children than Balochistan, 27% of school-aged children in rural KP are out-of-school.

KP’s Education Sector Plan [98] prioritises the integration of refugees in government schools, where possible through the inclusion of refugee children in KP’s Annual School Census and through the provision of free textbooks to children enrolled in refugee village schools. Previously, although 78.9% of KP’s population speaks Pashto, KP developed textbooks in multiple languages (i.e. Pashto, Hindko, Saraiki, Khowar and Kohistani). But under its recent adoption of the Single National Curriculum, textbooks will be developed in Urdu.

Balochistan

Of all Pakistan’s provinces, Balochistan faces the greatest challenges in education and infrastructure, with 38% of children in rural areas out-of-school, and only 19% of the population with access to the Internet [68]. Balochistan’s Education Sector Plan 2020-25 (BESP) [68] addresses some of these challenges through prioritising improvements in EdTech reach, limited infrastructure, and increased awareness as priorities for EdTech advancement.

In Balochistan, school textbooks are in Urdu despite more Balochi and Pashto speakers. The BESP addresses the linguistic challenges faced by refugees by committing to partnering with UNHCR, for example, planning to translate textbooks from Urdu into Dari and Pashto [68]

S3. Focus group consent script

Hello, my name is XX and I work for an organisation called the EdTech Hub. I thank you for taking the time to speak with me - we think your views and insight will be incredibly valuable for our research. Let me give you some more details about the research and what is required of you, then you can let me know whether or not you wish to take part.

In this focus group discussion, I would like to discuss your experiences of using technology to continue your education during and following your arrival in Rwanda/Pakistan. Our study aims to explore whether existing technology is suitable or helpful for refugees, and what could be done to make it more useful during and following displacement. We have a decolonial focus and would like to explore the power dynamics that exist around EdTech, if at all. We therefore hope that this research will contribute to the improvement of education technology for refugees - the findings will be published in an academic journal, where education technology designers will be able to access it to inform themselves on how best to design tech for refugees.

The focus group will take about 90–120 minutes. Our conversation will be recorded, and this recording stored securely in our internal system only until the conversation has been transcribed. After that has been done, the recording will be deleted. The recording will not be shared with anyone outside of our organisation. The academic paper that will result from the focus group will not mention you by name or mention any identifying information. Everything you say will be confidential. However, if I believe that you or a child might be at risk, it is my duty to report this to somebody.

After this focus group discussion, you will have the opportunity to review the findings and check that what has been written represents the views you expressed. A summary of findings will also be made available to you in the language of your choice.

It is your choice to take part or not. If you choose to take part, you can refuse to answer any questions you are uncomfortable with, and can choose to stop participating in the focus group at any time.

The focus group will be conducted in [language]. However, please respond to my questions in whichever language you prefer, and if you would like me to explain anything in a different language, please just ask.

Do you have any questions?

Do you all consent to participating in this focus group discussion? (Y/N)

(If no) If you are comfortable sharing, why do you not want to participate?

If you have any questions or concerns, or would like to withdraw your consent following your participation, please contact Katrina Barnes (project manager): k.barnes@jigsawconsult.com

Please note that this consent script will be emailed to you after the session, for your records.

S4. Focus group template

Ice-breaker (5 mins)

Suggestions:

Go round and give your name, followed by the first word that comes to mind when you think of the word 'education'.

Go round again and say the first word that comes to your mind when you think of the word 'technology'.

Tell us one positive memory from your education so far.

Questions

Experiences of EdTech (1 hour)

Can you tell me a little about where you were on your education journey at the point of becoming a refugee?

What level were you at?

What were your goals (education and employment)?

(10 minutes)

Response:

Can you tell me about what you wanted/needed when you came to Pakistan/Rwanda?

To what extent did these wants/needs include education?

What were your educational goals at that point (i.e. to continue where you left off/to start something different...)

(10 minutes)

Response:

Tell me about the tech products you used when trying to resume your education.

POLL: Did you use MOOCs (open online courses)? (YES = XX, NO = XX)

POLL: Did you use an app? (YES = XX, NO = XX)

POLL: Did you use a website? (YES = XX, NO = XX)

Did you use any other kind of tech? What type?

(5 minutes)

Response to d):

Choose the tech product that you remember the best.

What made this product memorable?

How did you come to know about this product? E.g. suggested from a government program, an NGO, found on your own, etc.?

What was the delivery format (self-paced/live taught sessions?)

What kind of activities did it involve? (test-like exercises, discussions, essays)

Did the product present a specific end goal? (e.g. passing a test/getting a certificate)

If you can remember, what data did you have to provide? Did you have the option to opt out?

(15 minutes)

Response:

Now, try to evaluate the product that you have just talked about.

How helpful was it in helping you to achieve the goals you mentioned? Which elements of it were most helpful, and why?

Can you tell me about any challenges you encountered when trying to engage with this product? (connectivity, language, content, format, worldview presented through it, payment)

To what extent did you feel that the product was designed to meet your needs/educational goals as a refugee?

(15 minutes)

Response:

Have you or anyone you know ever been asked to participate in the design of a tech product?

If so, what was your involvement? (user-testing, co-design?)

Would this be something that would interest you?

(2 minutes)

Response:

Design workshop (45 minutes)

"If you haven't been involved in designing EdTech before, now is your chance! The task is to create a 'perfect' EdTech product for refugees in higher/further education.

This session is about possibilities and imagination: there is no limit to what you can suggest. So please put all the challenges you just mentioned to one side and imagine that you have a limitless amount of resources to draw on!"

In the first section, you were reflecting on your personal experiences and goals. In this section, I'd like you to think more about your community. Discuss: what do refugees your age think/feel/know/do? Therefore, what do they need from education?

(5 minutes)

Notes here:

Think about some of the products that you mentioned in the first part of this session. What were the successful elements of those products?

(5 minutes)

Record ideas here

Thinking about your community needs and also the successful elements of other products, start to build an idea for an ideal EdTech product for your community.

(30 minutes)

Format: what form does it take? (app, platform, course, other)

Record ideas here

Content: what topics would be covered?

Record ideas here

Pedagogy: how/by whom would content be delivered?

Record ideas here

Access: how can we make sure it is inclusive? (race/sex/language)

Record ideas here

Design process: who should participate/make decisions about the product design? Where should it be designed? How would it reach people?

Record ideas here

Wrap-up (5 minutes)

I hope that this has been an interesting and enjoyable experience! Is there anything else that you would like to add to the discussion?

Final thoughts:

Is there anything that you would like to ask me before we finish?

Thank you so much for your time today. Your participation is extremely valuable and will help to inform EdTech design recommendations for refugees. We will be in touch with a summary of findings and a chance to give feedback on what we write.