Including critical Approaches in HCI Curricula: A provocation

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ABSTRACT
This is not a paper [1]; it is more of a collection and reflection of tangled ideas and discussions on the politics of engaging multiple worlds in design. Discussions brought on by three African HCI researchers on their journey to define an identity for an African HCI curriculum. We invite the readership to engage with our stories and ponder with us these questions: 1) How might we help future designers engage and navigate multiple worldviews, some of which are less dominant? 2) How might we help them navigate uncontested politics and ethics of design encounters? 3) What are the challenges that we educators might face as we introduce critical approaches in the classroom?

CCS CONCEPTS
• Human-centered computing:

KEYWORDS
African HCI, Curriculum, Fabulation, Stories, Pedagogy, Design politics

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1 IN THE BEGINNING . . .

Researchers in HCI draw our attention to the significance of being mindful of what we make in the world and the implications thereof as core to a fourth wave in HCI [2]. Such concerns foreground the political challenges needed to disrupt dominant design narratives and give way for other perspectives to have an active and participatory role in the design process.

Absent from this conversation is the need to prepare a generation of designers and technologists able to contend with such ethical and geo-political challenges. Ethics and politics are becoming core to a fourth wave in HCI [2]. Such calls have motivated the work of African HCI scholars over the years [3], [4], [5], [6] [7], [8], [9]. One of the outcomes of such efforts is establishing the African HCI community, an initiative that furnishes regional activities (e.g., conferences, summer schools, curriculum design, etc.). Moreover, HCI education has been a recurrent key theme in AfriCHI community conversations [3], [10], [11], [12] and one which we seek to advance via experimentation with critical perspectives in design.

Therefore, in this extended piece, which evolved as a dialogue between five HCI researchers, we take the readers on an intellectual journey as we aspire to define and locate an identity for an African HCI curriculum. The question that supported this piece centers on what ‘African HCI’ is’ (and could be, and ought to be), and how an African HCI curriculum should be designed and adapted to support diverse pedagogical requirements. Questions are often raised as to whether “African” refers to the locations where HCI work is done, the persons undertaking it, recipient user groups or communities, the contexts of use and application, or the cultural influences of the solutions, designers, and users. Counterarguments are also made that HCI curricula are culturally neutral, and universal, yet they are not.

It is evident that African researchers and practitioners should design and develop localized technological solutions and/or adapt existing technology to their own communities’ norms, values, and systems. However, little attention has been placed on how to contextualise the supposed HCI living curricula, albeit the fundamentals are interspersed with adaptable modules for different institutions and contexts. Even with such recognition, currently, HCI curricula are developed largely without consideration of the various contexts of use, or the effects it might have on entire communities’ ways of living. A case in point is the current design rules and considerations that were developed for Western users but are contradictory to the African market and how aesthetics are viewed and interpreted to local understanding. Therefore, it is crucial to continuously examine the suppression or exclusion of voices and the recognition that knowledge exists in different domains. An African curriculum should come with an in-depth understanding of communities and their use cases where the technology is to be deployed.

We contribute to the conversation in the symposium by showing how our attempt to solve a “local” question of identity and location in Africa has only shown the entanglements of the local and the global. By sharing our stories from the other side, we make an argument as to how the methodological and theoretical toolboxes
required for addressing the fourth-wave challenges of HCI should
emerge from or at least be inspired by the practices at the periphery.
We will show in the remainder of the piece, how adopting criti-
cal fabulation (originally coined by Saidiya Hartman in feminist
technoscience - [13]), has directed us towards new sets of questions
that necessitated a critical rethinking of the African HCI curriculum
- one that supports designers in navigating political and ethical de-
sign challenges. As part of this extended piece, we seek to provoke
a discussion that focuses on HCI education and how it might meet
the challenges we identified in our fabulation journey. We hope
that the narratives we share will inspire teachable moments as we
continue to move the boundaries of HCI education forward.

1.1 HCI in Africa
In 2006, Jonathan Grudin posited that the field of HCI might have
no home or many homes [14]. This raises a range of questions about
the status of HCI as either a meta discipline, an eclectic discipline,
or an interdisciplinarity. The HCI narrative in Africa is even more
sporadic, with the continued tensions faced when importing and
uncritically adopting conventional HCI methods, approaches, and
techniques to technology design projects on the continent. In asserting
an alternative constitution of identities in HCI, the subprogram
of African HCI came about as a community of researchers and prac-
titioners designing and evaluating interactive systems for African
communities. With a shift from a developmental to a decolonial
focus [15], the community has challenged the status quo of tech-
nological innovation and begun to reimagine interaction design
that considers the plurality of the principles, practices, and knowl-
dge foundational to any design project in Africa [12], [16], [17].
As African HCI researchers and educators, we continuously quest
for finding an intersectional space for our distinctive African HCI
identities. This is not new, as Indigenous researchers have moved
toward making HCI a household term in African institutions and
industries [17], [18] either through the design of living curricula to
meet local challenges and opportunities or through the integration
of HCI’s knowledge practices into capacity development programs
and projects. In our collective conversations, we draw upon such
initiatives to consider, how has/may HCI take root in Africa? [18].

With the proliferation of technological advancement globally,
exposing local technology enthusiasts and practitioners to HCI’s
practices becomes crucial as a tool to curb the technocentric narra-
tive that is pervasive in technological discourses. However, tech-
nology designers and implementers do not always have access to
mainstream HCI facilities and resources, which are often curated for
academic institutions and multinational corporations. Moreover,
existing HCI curricula have been met with complexities where
there is a mismatch between the culture of origin and the context in
which they are applied. Consequently, ongoing conversations with
HCI researchers, academics, and practitioners in Africa highlighted
the need for an African HCI curriculum since the early inception
of the AfriCHI community [3], [10], [11], [12].

In an attempt to reshape some of these narratives, a workshop
to codeesign an African HCI curriculum was conducted in Septem-
ber 2021, specifically aimed at African educators and sponsored
by the Google Award for Inclusion Research program, 2020. The
workshop sought to discuss ideas about teaching and doing HCI
research in Africa and what this curriculum could look like to give
rise to HCI knowledge practices that are suited to African realities.
Through this curriculum effort, there was once more a consensus
that a distinctive African HCI curriculum is needed to fill the gap
between what educators convey, often from Western HCI resources,
and what students might encounter on the ground. This has mani-
fested a strong desire to share practical case studies with the hopes
of identifying lessons and strategies that could help guide those
embarking on HCI work on the continent.

1.2 Onto developing an African HCI
Curriculum
In the quest for an expanded HCI living curriculum, the authors
pursued the question, What is African about an African HCI cur-
riculum? The hope was that by identifying potential trade-offs,
we could put forth a roadmap for an African HCI curriculum that
addresses the experienced design-reality gaps and the inherent tens-
sions embedded in mainstream HCI when teaching and doing HCI
in Africa. In this section, we reflect on our collective intellectual
journey with the question above and our attempts to find fram-
eworks that could accommodate the complexities of problematizing
this issue. Although a loaded question, we recognize the complexi-
ties of interrogating it dialectically. We approached this question
as one that is foundational to the future identities of African HCI,
and particularly one that recognizes how the earlier constitution
of African HCI identities and narratives are positioned against a prior
discourse of difference, nothingness, and backwardness [16], [18].

Our first attempt to unpack the question entailed identifying
how African culture and context figure in the appropriation of
HCI’s models and methods of design. Is there something distinctive
about African cultures of design and design(s) in the African context
that we need to be aware of in our technology design projects?[19],[20].
One could argue that being sensitive to the context is
inherent in HCI practice, which calls for an appropriate response in
design. Therefore, African HCI should be no exception. However,
being sensitive to a context without appreciation of the cultural
nuances could still lead to overlooking important characteristics
in the appropriation of technology. Cultural issues are likely to be
unique and may require thorough examination prior to adopting
external methods born from different worldviews. Thus, we felt that
a subtle distinction is desirable to explain where a social context
is called upon in design spaces, and where cultural attributes are
framed in design thinking. The emphasis of the distinction was to
draw some implications or guidelines on how to do practical HCI
research in Africa. Presumably, we were attempting to develop a
nuanced understanding of context and culture by identifying where
their loose translation in design work might help us to define a
design worldview from African HCI.

We approached this effort from two strands. First, we were inter-
ested in documenting how dominant HCI has approached culture
[21], [22], [23] and context [24], [25] as a placeholder for under-
standing the specificity of a domain of work. Second, we were
interested in identifying how the entanglement of context and cul-
ture interferes with designing for and with African communities
[26], thus attempting to unpack this complexity when practitioners
and researchers uncritically import (i.e., translate and apply) HCI
We reflected on our past projects on community empowerment and desire an intellectual space where differences are appreciated. What was it that motivated us towards our initial quest for finding a value proposition for design should be devised. Accepting and trying to elicit what differentiates our identities or those of the African culture and context in transnational design spaces is desirable, but not required, as it might make visible the obscured social values and power relations that otherwise might go unnoticed.

In our first exercise, we, therefore, attempted to untangle the common framing of culture and context as interchangeable terms. We reflected on our past projects on community empowerment and digital education to draw out cultural attributes and contextual factors that might be considered African. We soon realised, however, that the nuances we identified as we pondered upon the culture/context distinction were not uniquely African; these attributes could similarly be identified in other design spaces beyond Africa. At this point, we were puzzled: Why is it that we could not pinpoint specific “African” traits in our own design work? We knew from our lived experiences with these projects that there were moments our Western HCI training could not accommodate the nuance of the communities we engaged with. Yet we wondered how the lessons that we would have taught our students were rendered invisible in our collective reflection on cultural and contextual factors. What was it that we had missed? In our desperate attempt to locate our African HCI identities, we sought an alternate framing that then elucidates the appreciation for difference without separability and builds solidarity across contestable spaces.

This led us to explore feminist solidarity as a useful framework for comparative research across polarized borders [28]. We approached the notion of feminist solidarity as an alternative approach to exploring our initial question. From this preview, feminist solidarity provides us with a temporal way of drawing alliances across differences and commonalities. However, reflecting on both the culture/context and feminist solidarity framing, we felt we were reproducing a narrative that centres Western approaches to HCI while trying to elicit what differentiates our identities or those of our users, thus prescribing how Western HCI practices could be applied elsewhere. In distilling the African differences, we felt that the idea of African design is still rendered as an exotic object to which a value proposition for design should be devised. Accepting this frame of thinking was troubling, and we asked ourselves what was it that motivated us towards our initial quest for finding/making home(s) for our collective identities. It might be that we desire an intellectual space where differences are appreciated rather than identified as a token for classification; a space where not all conform to one way of thinking of and doing design work. Or maybe we need to rethink the rules of engagement and knowledge production practices in and about Africa. Could we find an alternative way to reflect on our work that would bring our aspirations for technological innovation and social change to the fore? Our experimentation directed us towards critical fabulations in design.

In Critical Fabulations: Reworking the Methods and Margins of Design, Daniela Rosner outlined four tactics for fabulating design as investigative activism that explores the past, present, and future:

- building alliance across differences,
- interfering with dominant narratives,
- recuperating the residues of erasure, and
- extending existing forms of circulation [29]

Would critical fabulations help explain the mismatch between our collective lived experiences and the fragmented stories that foreground our design reports? We asked ourselves, based on Rosner’s questions concerning whose stories underpin our design, what forms of innovative work did we omit/silence when we published insights from our design projects? As part of our initial fabulation exercise, we revisited our past projects with this perspective in mind, leading us to consider the tensions at play as we attempt to (re)present the sequence of events through re-writing against our recollection of the records. It is important to highlight that fabulating our project reporting is not in any way attempting to restore historic lived experiences nor shift traces of events for the sake of an alternative story, but rather a movement toward understanding the discursive conditions that give rise to specific narratives being told/untold. By reflecting on whose stories we might have blurred or shown in our reporting of specific projects, we thought we could rework the ontologies, methods and practices of African design by re-tracing the ideas we might have silenced/erased. This kind of fabulating could take two different forms: first, focusing on the residual tales that might emerge from the process of blending fragmented and recollected accounts of social events; and second, identifying how specific actions perpetuate a particular worldview of thinking and making of the African world.

2 OUR STORIES TOLD AND RE-TOLD

For example, Hafeni shared a story that attempts to retell the tales of community-led research projects in South Africa. She reflects on how critical fabulations challenged her to question some of the choices she made and consider the voices that were silenced in reporting some of the work. In her words:

“In this example, I joined a project team working in a peri-urban area in South Africa and my role was to try and understand some of the existing communication networks within the community. I sought to identify the ways in which technology could be used to either strengthen some of those networks and interactions or in a way add any value to what different stakeholders within the community were already working towards.

As I reflect on my role and my interactions with different people in the community including those I interviewed and had discussions with, I realize that in many ways I was silencing my own voice. And ultimately limiting the voices of the key people who were assisting and working with me to carry out the research. As an outsider, I felt that I should limit my ideas as to how the research project should progress; particularly when it came to sharing and communicating the research findings. In a way, in my mind, I felt that there was only one way to share research findings, for example, through a formal academic paper, which had to be interesting enough to the global research community.

Even though I wanted to see other forms of communicating research, I somewhat felt that the work would not be taken seriously and that I didn’t have permission to change or challenge academic norms. So, I went the usual academic journal/academic conference route and...
wrote a paper. As part of the writing process, we invited community members who were actively involved in the project to be co-authors. However, I sometimes wonder if our desire to be more inclusive in the writing process might have been a burden to our community co-authors. Mainly because academic writing is not something they are accustomed to, and English is not their first language. I recall one key individual who worked with me throughout the project. I wonder how things could have been different if I was brave enough to challenge the norm of presenting/reporting research findings. He was very passionate about seeing positive change within his community and supporting young people to make a better living for themselves.

He was also an artist. He did music, mural art, and drew comics. As I think back, I wonder what it would have been like if our findings were produced, for example, as a comic book or presented in a different form of art. I wonder what his engagement in that process would have been like; what message would he have wanted to be conveyed, had he the freedom to use his natural form of communicating?

So, my view of what I think is acceptable as academic knowledge may have limited the opportunities for what we communicated in the end. It held me back and because of that I didn’t even give my co-researcher from the community the opportunity to use his own way of expression to truly be engaged in the communication process.

For Shaimaa, the emphasis was on how adopting the key tenant of critical fabulations has helped her view a former design project in a new light.

The project I revisited took place in an Egyptian rural school and aimed at developing a collaborative digital game to assist the children in the tedious task of memorizing the multiplication tables, a requirement of the primary school math curriculum. Working in groups and playing the game helped the students improve memorizing the tables. The results showed a reduction in their thinking time or time taken to answer a multiplication question. Also, statistical significance was found between the results of pre-play and post-play exams. This is how I reported the success of my design in a CHI paper.

Taking critical fabulation as my lens to inspect this work, I tried to look back and think of the voices and the stories I might have unintentionally silenced. I realized I had in my mind that innovation has to be in the form of a digital artifact, most likely because this is how I reported the success of my design in a CHI paper. So, my view of what I think is acceptable as academic knowledge may have limited the opportunities for what we communicated in the end.

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The teacher’s innovative way was an extra resource that could have helped the students when they were stuck. That led me to think that the digital approach reinforced a system that disadvantaged the students who were less able to memorize and consider their inability to memorize as an act of laziness that needed training or correction. For the students who had trouble memorizing, the teacher’s approach might have been an extra resource to help them when they are stuck.

The digital game, on the other hand, only emphasized and encouraged memorization with no alternatives. Perhaps if we thought differently about the teacher’s method and not dismissed it as “non-digital” or not “modern” enough. We would have ended up with a different design that provided more inclusive alternatives. If I have the chance to repeat this project, I would persistently try to question and surface my own assumptions on what a useful innovation in this context is. I would also work more closely and collaboratively with the teacher rather than considering her knowledge as “input” to my design.

To further demonstrate the vitality of critical fabulation in supporting accountability and reflexivity, Muhammad, reflected on the sort of question that emerged during his PhD Viva and how the intellectual exercise provokes new questioning on the reporting of field cases:

“The PhD research in question examines ways in which the mundane practices of software practitioners in Nigeria can be localized to give rise to the design and deployment of educational tools that are saleable and usable. During the Viva, the examiners were keen on how the empirical description of software project activities and processes might be considered as an expression/projection of decolonized software development. Put differently, the examiners were concerned that significant effort was placed on theorizing software project works rather than showing how traces of decolonisation are seen evidently by the description of processes and activities.

In one of the fabulation sessions, Shaimaa posed questions that demanded a critical analysis of whether the narratives presented in a specific section of my thesis represent a praxeological expression of localization of conventional paradigms of software work from member activities; or whether the accounts might be considered as forming part of a particular interpretation of members’ distributed work. With a new interpretation of the examiners’ questions, it made me ponder on whether I was too focused on theorizing practitioners’ agility to showcase the decolonization of software development; and as a result, might blur organizational specificities where localization of conventional paradigms of technology design are rendered as moving from postcolonial to decolonial practices of design.

This led to a critical rethink of how ideas such as software engineering contracting, designing for the locale, and the framing of users and uses of technology in education could highlight how practitioners operate within the dynamic of locales. As I re-write a chapter of my thesis, new sets of questions emerge as I attempt to fabulate the stories rendered in a particular chapter of my thesis. This led to several moments of self-reflection and confession; a process of labouring to imagine what was said, or what could be said, thus a continuous activity of experimentation, and a movement towards re-working the fiction inside the facts. As a result of close attention to case details, the revised chapter described processes and activities thickly, with little emphasis on showing how framing practitioners work as a totality could demonstrate the decolonisation of software development.

Taking Stocker’s ‘Dont Lie’ working methodology in history writing argument at face value [30], I wonder whether I’ve been making things (not as in lying but framing specific narratives so that they convey a particular outlook about African design). This way, critical fabulation provided a working methodology for questioning and answering problematically. It also acted as a steppingstone for re-imagining new project ideas or pedagogical activities. For example,
I am currently involved in a project that explores the vague topic of a digital good, what it entails and how it can be achieved across disciplines and sectors of society. As part of an MA course in a design school at Lancaster University, I shared our intellectual journey towards critical fabulation; from its conceptualization by Saïdtya Hartman in Feminist technoscience to Daniela Rosner’s adoption in rethinking design method, and to its adoption as a framework for searching for a home(s) for our collective HCI identities. We adopted critical fabulation as a metaphor for expanding design pedagogies and toolbox, and one that requires not only a range of newly situated case studies but also newly situated approaches to connecting, interpreting, retelling, and rewriting design stories.

To show the vagueness of ‘digital good’ as a research theme, I engaged students in a fabulation exercise around the question of what attributes should define the good and bad aspects of social media platforms such as Instagram, Facebook, We Chat, Snap Chat, TikTok, and Twitter. With four groups of students working on any two of the above, they produce content that ranges from the good, the bad, and the in-between (the grey areas that are contestable). This led to group-wise reflection on the fables generated by each group as a way of identifying the sort of properties, and perhaps the stories blurred as a result of the thinking in the spectrum of good, bad, and ugly. From our collective exercises and teaching and engaging with critical fabulation, I reckon that I’ve become more self-aware of the wider implication of applying theoretical or conceptual ideas into our research, teaching, and engagement.”

2.1 So what...?

Our new set of reflections prompted us to peep through the veil and yield new stories. Shaimaa foregrounded the non-digital innovations when developing digital collaborative games for teaching mathematics; Muhammad reflected on the unintended consequences of particular mindsets toward the creativity of local actors in software development, while Hafeni reimagined the communication of project activities through art and music. In our fabulation attempt, we recognised how our subscriptions to the worldviews we adopted manifested in (1) centering the digital as the only/dominant form of innovation; (2) Western models of human-centered design dominating how “users” are centered; and in (3) the marginalization of local ways of knowledge production and dissemination—consequently limiting other ways of knowing and creating. When the exercise was redone this way, we had a “moment of truth.” By asking the right questions, the questions whereby the politics of design surfaced and interrogated, many of our veiled stories unfolded conveniently. In this light, we saw that African design(s) might have taken different paths. We contend that we would have reported different stories if we had paid close attention to the voices emerging from the locale, as they represented context-specific views of innovation, creativity, and agility.

What started off as a quest to differentiate context and culture in African design took us on an HCI decolonisation path — (“dismantling and re-envisioning existing power relations, resisting past biases, and balancing Western heavy influences in technology design by foregrounding the authentic voices of indigenous people in the entire design process”) [15]. In our journey we recognise that we were not intentional in applying decolonial thoughts [31], [32], [33], [34], [35], as we reflected on the identity of African HCI, which in retrospect would have enriched this exercise. However, critical fabulations offered us a critical perspective to foreground the power structures and authentic voices that were erased, which in part is what decolonisation ascribes to doing. We realise that even in design spaces where contexts or cultures may be similar (which can unintentionally lead to eliminating the need to differentiate from dominant design practices) it still necessitates critical reflection to unmask and reimagine existing power structures. This process of being critical was eye opening and encourages us to constantly find ways to embed critical toolkits as we teach the next generation of designers and look to redesigning our curricula.

Looking forward from our intellectual experiment, fabulation as a lens didn’t show us how to do HCI design work in Africa; instead, it provided a critical way of looking at the bigger picture of doing HCI work—it’s general problem, its practices, and its knowledge—and the stories that are told and untold in the process. Fabulating our collective stories has drawn us closer to our quest for making/finding an intersectional home for our distinctive African HCI identities. Moreover, this exercise has helped us realize the challenges of interrogating the worldviews directing our design identities and narratives. It also showed the limitations of adopting apolitical frameworks to examine and report design encounters where politics and power are inherently central.

Perhaps the uniqueness we have been trying to identify in African HCI might not be in certain contextual factors or cultural traits but rather in the political and ethical relations surrounding design innovation and in building awareness of their implications. Our fabulation experience taught us that building this level of self-awareness and reflection does not come naturally to researchers and practitioners. Reflective tools and methods are needed to help designers a) develop such awareness, b) appreciate and tune in to existing and emerging power differences, c) recognize when and how to downplay their own voices, and d) interrogate the mindsets that dominate design encounters. These, we argue, should be the focus of an “African” HCI curriculum—a curriculum that inspires us to be reflexive and critical of our understanding of the world before “remaking the world through design” [36]. We then thought, is it only the “African” curriculum that would need such tools? Or is it any HCI curriculum that aims to help future designers work across boundaries and borders? Could it be that in our search for what makes African HCI unique has uncovered a global learning opportunity for embodying critical reflection in our processes of developing HCI curricula in the future.

Furthermore, the acts of tuning in and downplaying voices are not free of challenges, particularly when practitioners are expected to downplay their voices as activists rather than interventionists. For example, Hafeni downplayed her voice as an outsider to the community when working with community partners, which is a commendable practice; however, she inadvertently also downplayed her voice in not challenging the existing forms of circulating project research findings as written reports, despite her inherent desire for this change to align with the way in which community members expressed themselves. This was another aha moment for us, as it not only revealed an assumption that the contexts in which we work are the sites of activism but also the truth that activism is needed to challenge and change Western academic practices to...
fit with multiple worlds. This observation is in line with others who provided a set of reflective questions to guide us into deeper engagement with the kinds of meaning we create in our work, the kind of impacts we have, and the futures we are (or might be) creating as a direct result of our choices and actions [36].

3 WHAT IS NEXT

In this extended piece, we reflected on our shift in perspective as we grappled with the question of what is African about African HCI. We reckon that the fabulation exercise was a liberating experience as we moved away from the academic reporting norms we are accustomed to, without the fear of being judged by our peers, and instead permitted ourselves to tell the other side of our stories—the sides that might not follow traditional academic convention. Through this shift, we recognised the need for methodological capabilities to enable critical discussions on the politics of engaging multiple worldviews, an issue that we presume could further shape future trajectories of doing design work in transnational and transdisciplinary spheres. Our attempt reveals that defining the identity of an African HCI curriculum calls for a disruption of dominant design narratives. Furthermore, reflective tools that enable researchers and practitioners to better tune in to the subtleties and nuances of the African context should be core to an African HCI curriculum. We invite the readers to engage with the questions we posed earlier in the article 1) How might we help future designers accept and navigate multiple worldviews, some of which are less dominant? 2) How might we help them navigate uncontested politics and ethics of design encounters? 3) What are the challenges that we educators might face as we introduce critical approaches in the classroom?

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