

# Higher Education for Good

Teaching and Learning Futures



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# 19. Imagination and justice: Teaching the future(s) of higher education through Africanfuturist speculative fiction

*Felicitas Macgilchrist and Eamon Costello*

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The inequalities in higher education are palpable. For many observers, they are worsening as data-intense technologies are used more widely. Specific performance metrics generate hierarchical rankings of universities, causing uneven global access to essential infrastructure. Monitoring technologies of surveillance disproportionately penalise students of colour. Predictive analytics systems block the paths of those students with barriers to learning who the system predicts to be unlikely to succeed. The use of technologies within capitalist logics of profit and growth is stripping the planet of resources, with uneven impacts on people around the world. At the same time, hyperindividualism undergirds what can be seen as the colonial knowledge practices produced and reproduced in higher education, rendering individual students and educators responsible for their own success or failure. The structures and histories of disempowerment are made invisible.

Against this backdrop of “multi-layered digital inequalities” (Czerniewicz, 2022), this chapter responds to the call to elaborate on glimmers of alternative futures which foreground equity, social justice, care, and relational sustainability, by sketching a locally situated pedagogical opportunity that invites students to reflect on what ‘good’ can mean in higher education. The guiding idea is that by asking “what if?” with speculative fiction (Okorafor, 2017c), issues of power and transformation can be raised that will trouble most norms of higher education today. By inviting students to trouble these norms, educators

invite them to open new possibilities for the future. Speculation is essential to imagining and creating alternatives to the current mess in this unequal and unjust planet.

To this end, this chapter presents a potential course (a 15-week seminar) in which students read speculative fiction and write their own stories about possible/potential/improbable futures for higher education. The course and this chapter aim to open generative spaces for students and lecturers to *reflect* on their (our) own positions in the academy, to *critique* the reproduction of classed, raced, gendered inequities in higher education through, e.g. digital technologies, automation or platformisation, and to *generate futures* that are oriented to justice. The course contributes to the growing movement in which re-thinking and re-imagining enable us to re-act in our contemporary entangled world in the reparative ways to which this crucial prefix “re” gestures (Facer, 2019a; Haraway, 2016).

The chapter begins by setting the scene, describing the context and key choices behind the course design. It then outlines how the course takes four steps towards “the good” in higher education: (1) by shaping an anti-racist, anti-classist storytelling and workshopping style of listening, respecting and giving generous feedback to one another; (2) by unpacking the power relations which make us who we are becoming (subjectivation, datafication); (3) by strengthening ways of becoming which are less hegemonic today (more-than-human sympoiesis, decolonised knowledge); and (4) by inviting students to write stories of higher education for good. In the conclusion, the chapter returns to the argument that higher education needs new ways of imagining the future otherwise, and that curating a blend of theory and speculative fiction is one way to open a space for shared imaginings. Finally, there is an afterword where the diary of a (fictional) student in the class is shared.

### Setting the scene

The chapter took shape while having conversations about *how* and *what* to teach that addresses today’s inequalities, but simultaneously imagines other futures. Perhaps due to the growing awareness of inequalities across society, including the long-standing critique of the

“corporate” university, futures-making is generating a huge amount of interest today. Strategies for how to generate alternative futures draw on future workshops (Jungk & Müllert, 1987), empathy-based stories (Särkelä & Suoranta, 2020; Wallin et al., 2019), speculative story-writing sprints (Johnson 2019), pedagogical tools to “dig deeper” and “relate wider” inspired by Indigenous analyses and practices (Andreotti et al., 2019), critical design within an Afrofuturist aesthetic (Holbert et al., 2020), unpacking the conditions of possibility of current inequalities (C. Kelty, personal communication, May 5, 2022), or inviting students to write social science fiction (Lackey, 1994).

The following sketches out a seminar designed from and for a specific local context in Germany. Higher education in Germany remains predominantly white (which includes the authors of this chapter), most of the professors identify as cis-male (which one of us is not), and despite minimal or no tuition fees, students are largely from the middle or upper class. Imagine, therefore, a potential seminar, which as we write has not yet been put into action, for a large public university in Northern Germany. The group meets, as German seminars tend to, once a week for 90 minutes, for about 15 weeks. Imagine the course embedded in educational and cultural studies undergraduate courses, but open to all students across all faculties.

We were interested in reading beyond the region in which we live (Europe), and in teaching with authors beyond those (un)marked as white, and male who are so often read and cited more frequently than others (Dion et al., 2018). We came across *Binti*, a science fiction novella that speaks in a unique way to urgent issues facing higher education today (Okorafor, 2015). The author, Nnedi Okorafor, describes her work as “Africanfuturist”. It is “concerned with visions of the future, is interested in technology, leaves the earth, skews optimistic, is centred on and predominantly written by people of African descent (black people) and it is rooted first and foremost in Africa” (Okorafor, 2019).

Thus *Binti*, which students can loan from the online Open Library, accompanies the class through the semester.<sup>1</sup> *Binti* is a young woman who has been awarded a place at the Oomza University. Oomza Uni is an elite institution, only 5% of the students are human. It is a planet in a

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1 Okorafor’s *Binti* is available here for loan through the Open Library: <https://archive.org/details/binti0000okor/mode/2up?view=theater>

distant galaxy. Binti is the first in her family, and of the Himba people, to go to university. On the way to the launch pad, she finds herself among the light-skinned and wealthy Khoush. Some of them make fun of, or are repelled by Binti's thick hair. However, on the trip to Oomza Uni, on a *Miri 12* — a living spaceship like a shrimp, Binti befriends other first year students. The plot of the story revolves around events on the spaceship. The Meduse appear and kill everyone on board except Binti, who is protected by a particular technological device (*edan*), and her *otjize* which is a special paste she makes from red clay to cover her skin. Binti uncovers the purpose of the current Meduse killing spree: Khoush scholars stole the stinger of a Meduse chief for their research, and the Meduse want it back. At the end of the novella, Binti is able to forge peace using openness, communication and her *edan* to negotiate with the university on behalf of the Meduse chief. This 81-page novella thus touches on central issues of inequality and injustice in today's institutions of higher education.

### Pedagogical approach: Anti-racist, anti-classist, generous workshopping

Students in this seminar read fiction and create stories. Storytelling offers a uniquely creative, open, and yet localised or grounded mode of:

support[ing] our students to name and understand the troubles we are facing, to think with hope and with rigour about the sorts of futures that are being made today and to enable them to care for, imagine and make liveable futures in collective dialogue with others whose futures are also at stake. (Facer, 2019b, p. 4)

Storytelling as rehearsal, as playing, as never-quite-finished speculative practice tries to bring back “study” (as “the incessant and irreversible intellectuality” of activities like walking and talking, dancing and suffering) into universities from which it has been replaced by grading (Harney & Moten, 2013, p. 110).

The seminar encourages students to engage respectfully with each other's storytelling. It draws on Chavez's (2021) *The Anti-Racist Writing Workshop: How to Decolonize the Creative Classroom*, in which the author presents an approach to learning and teaching as a thoughtful, critical,

and democratic mode of engaging with students and enabling students to engage with one another. Chavez's goal of identifying ways to align processes of critique with principles of creativity and justice are relevant to teaching across the disciplines. For this seminar, we imagine the first few sessions as reading sessions in which the class discusses and reflects on *Binti* and related research literature. In later sessions, students work on creating their own storied future(s), utopian, dystopian or otherwise speculative. These latter sessions have a more explicitly workshopping character in which students present and receive feedback on ongoing ideas or drafts.

Chavez offers ways to overcome the kind of feedback where the student only listens while their work is taken apart by others. Instead, she describes ways of "fostering engagement, mindfulness and generosity" (which includes removing competition), of "instituting reading and writing rituals" (including bringing putty to fidget with in class), of "promoting camaraderie and collective power". She draws on Liz Lerman's *Critical Response Process* in which students moderate their own feedback session, and students give their feedback in response to the moderator's priorities (Lerman & Borstel, 2003). This anti-racist workshop is also an anti-classist, anti-sexist and anti-ableist workshop. Thus, an incredibly powerful reworking of the hierarchies often reproduced in higher education.

It includes conversations in which students and professor explicitly deconstruct traditional hierarchies (hooks, 1994). This includes tapping into the discussions on #ungrading and providing student opportunities to co-design rubrics for receiving feedback. It means reflecting together on what makes good discussions (Brookfield & Preskill, 2005). For all the sharing and discussion activities noted below, the class uses strategies from "Equity Unbound" (Cronin et al., n.d.) and "liberating structures" (Lipmanowicz & McCandless, 2013) that aim to generate excitement collectively and equitably (hooks, 1994), such as "1-2-4-All", "9 Whys" and "Troika Consulting".

In the first session of the semester, we introduce ourselves. We watch a 10-minute TED Talk by Nnedi Okorafor from 2017 where she reads from the novella and reflects on Africanfuturist science fiction. We introduce the workshopping format and use it to discuss the current scholarly interest in futurity, and how the class can engage with the

exciting questions that are currently being addressed by generatively critical research to imagine and make liveable futures together (Castellví et al., 2022; Facer, 2019a, Facer, 2019b; Muñoz, 2019; UNESCO, 2021).

By the second session, all students will have read the novella. We reflect on the story together. This may include Binti's gendered/classed/raced/heteronormative experiences at the beginning of her studies: she is Black, poor, rural and female. Students identify different aspects that point to potential university futures. If she were teaching, Felicitas would share her initial (daunting) experiences at a British university, and her personal "aha" moment towards the end of the first year when she first realised that the wealthy students from private schools, who seemed so knowledgeable, articulate, and superior did not actually know more about the specific issue being discussed than she did. Many of her (comprehensive school) friends had these aha moments, but only after months of being silent and feeling inferior in class. Eamon would talk about arriving just after the start of lectures, during his first year of university, so he would not have to meet fellow students, but also about learning to recognise and eventually even befriend social anxiety as a normal part of life. Any students who would like to, also share their own stories of starting university.

## Unpacking power relations

The second phase of the seminar engages with central concepts and topics relevant to higher education. In each, we discuss an extract from *Binti* and selected academic publications which invite students to unpack hierarchical power relations in education.

## Subjectivation

The first theme is subjectivation. Okorafor (2015) writes:

"Stupid, stupid, stupid," I whispered. We Himba don't travel. We stay put. Our ancestral land is life; move away from it and you diminish. We even cover our bodies with it. *Otjize* is red land. Here in the launch port, most were Khoush and a few other non-Himba. Here, I was an outsider; I was outside. [...] I was by myself and I had just left my family. My prospects of marriage had been 100 percent and now they would be zero. No man wanted a woman who'd run away. However, beyond



my prospects of normal life being ruined, I had scored so high on the planetary exams in mathematics that the Oomza University had not only admitted me, but promised to pay for whatever I needed in order to attend. No matter what choice I made, I was never going to have a normal life, really. (p. 12f.)

How (as what or as whom) has Binti been addressed that leads to this train of thought? How does she enact herself as a particular subject of knowledge and power in this excerpt by refracting what others have said to her or acted towards her? Who had laughed at her for wanting to go to university? What did it do when one of her sisters told her to be rational and stop being selfish? Who congratulated her (and was anyone else moved to tears at that point in the story)? What is the power of scholarships? Who decides what a “normal life” is? Who benefits and who loses from these imaginations of normality? What tensions meet in this extract?

Students would have read some key texts in English on subjectivation in advance for this session (Butler, 1997; Foucault, 1982; Hall, 1997; Youdell, 2006), and in German (Reh & Ricken, 2012; Ricken et al., 2019). Linking the extract to this literature, we could tease out, for instance, the sections in the book in which Binti was addressed to see herself as a non-travelling, rooted Himba, as a cis woman with a good chance of a good marriage to a good cis man, as a runaway whom no Himba man will want to marry. And how she then sees herself differently when addressed by Oomza University as one of the best students in the galaxy, so good that they not only admit her, but will cover the costs of getting her to the university and enabling her to complete her degree there. The class could return to the gendered, raced, classed, heteronormative aspects that were mentioned in the first reading of the novella, and link them to theories of subjectivation. Students could find traces in the story of the norms and conventions that make her legible as a subject within the Himba frame in which she grew up.

One important idea will likely be “agency”, and we could discuss the (powerful) idea of “discursive agency”, i.e. that “[b]ecause the agency of the subject is not a property of the subject, an inherent will or freedom, but an effect of power, it is constrained but not determined in advance” (Butler, 1997, p. 139). This opens space for the different ways in which we are addressed to collide, mingle and lead to new openings and other

foreclosures. We could discuss this questioning of the idea of a sovereign subject, this disruption of the idea of free will and autonomy, including how the agency of a post-sovereign subject makes space for Oomza Uni to address Binti in a different way that can lead to unexpected paths.

### Datafication

The next session explores datafication, the transformation of ever more information about our lives into machine-readable data that can be stored, processed, aggregated, and accessed. Okorafor (2015) narrates:

The travel security officer scanned my astrolabe, a full *deep* scan. Dizzy with shock, I shut my eyes and breathed through my mouth to steady myself. Just to leave the planet, I had to give them access to my *entire* life — me, my family, and all forecasts of my future. I stood there, frozen, hearing my mother’s voice in my head. “There is a reason why our people do not go to that university. Oomza Uni wants you for its gain, Binti. You go to that school and you become its slave.” I couldn’t help but contemplate the possible truth in her words. I hadn’t even gotten there yet and already I’d given them my life. I wanted to ask the officer if he did this for everyone, but I was afraid now that he’d done it. They could do anything to me, at this point. Best not to make trouble. (p. 13)

What kind of data about Binti’s entire life could be stored on this astrolabe? How would Oomza Uni gain from these data? How would the forecasts about Binti’s future be made? Who decides what data to store or what data to use to make predictions? Who acts on the forecasts? Who controls the data? Who can render it unavailable? What kind of protests might there have been in the past of this world (the future of ours)? Do we imagine the officer scanning everyone’s astrolabe in the same way or are there hierarchies between Himba and Khoush in privacy and surveillance? Why was Binti afraid now that the security officer had seen the data? Does datafication inevitably lead people to think it is best not to make trouble?

The astrolabe is a hand-sized device built by Himba designers. Binti is an expert astrolabe maker. The Khoush pay a lot for a well-designed astrolabe (despite having little respect for Himba people). This scene can open up discussions about the datafication of the university: from the quantification of life and surveillance capitalism (Zuboff, 2019; Amiel et al., 2021), data colonialism (Anonymous, 2016; Couldry & Mejias, 2019)

and the spaces of big data (Bernard 2021) through justice-oriented data literacy (Raffaghelli 2022), obfuscation tactics (Brunton & Nissenbaum, 2015), to the exploitation of people and the environment that occurs in the production of data-processing devices (Crawford & Joler, 2018).

With the help of excerpts from a selection of scholarly texts, we unpack the metaphor often used in discussions of higher education of data as the “new oil”, and how this metaphor suggests that data are a resource lying around to be found and monetised (Bock et al., 2023; Iske et al., 2020; Jarke & Breiter, 2019; Macgilchrist et al., 2022; Parra et al., 2018; Williamson, 2018; see also Amiel & do Rozário Diniz, Chapter 18, this volume). With this literature, we discuss an alternative understanding of educational data as “made”, constructed, produced. We discuss different critical positions in debates about datafication: a humanist critique which warns about the loss of human dignity in the way data are amassed and colonised (Couldry & Mejias, 2019; Kwet, 2017; Zuboff, 2019), critical analyses of the racialising and heteronormalising forces of datafication (Benjamin, 2019; Costanza-Chock, 2020; Dixon-Román et al., 2020; Prinsloo, 2020), and data activism and struggles for data justice (Daly et al., 2019; Gutiérrez, 2018; Milan & Treré, 2019). Students reflect on how they feel or how they would act in Binti’s position, and thereby elaborate their position on datafication.

## Becoming otherwise

A challenge of the datafication session could be that it pulls us too much towards the role of data today, rather than speculating about becoming otherwise in the future. The seminar’s third phase turns towards this: where becoming “otherwise” refers to ways of living, learning, teaching that are outwith hegemonic hierarchies (Andreotti et al., 2020).

## More-than-human

The next issue that we tackle is more explicitly in the realm of the speculative: the more-than-humans in/of higher education at Oomza Uni. First, there is connection to technological artefacts. Okorafor (2015) writes:

I looked at my cramped hands. From within it, from my *edan*, possibly the strongest current I'd ever produced streamed in jagged connected bright blue branches. It slowly etched and lurched through the closed door, a line of connected bright blue treelike branches that shifted in shape but never broke their connection. The current was touching the Meduse. Connecting them to me. And though I'd created it, I couldn't control it now. (p. 41, 42)

With this blue current, Binti and the Meduse can understand each other even though they continue to speak their different languages. The *edan's* current connected to Binti translates.

Second, there are multispecies beings. While negotiating with the Meduse chief, and before she can negotiate on behalf of the Meduse with Oomza Uni, Binti is stung by a Meduse in the back. Later, she realised what changed through this sting. Okorafor (2015) writes:

My hair was rested against my back, weighed down by the *otjize*, but as I'd gotten up, one lock had come to rest on my shoulder. I felt it rub against the front of my shoulder and I *saw* it now. [...] I rubbed off the *otjize*. [The lock] glowed a strong deep blue like the sky back on earth on a clear day, like Okwu and so many of the other Meduse. [...] My hair was no longer hair. (p. 81)

Later, Binti looks at herself in the mirror, after washing off all her *otjize* and before applying new *otjize*. Okorafor (2015) writes:

The *okuoko* were a soft transparent blue with darker blue dots at their tips. They grew out of my head as if they'd been doing that all my life, so natural looking that I couldn't say they were ugly. (p. 87)

What makes up a human? When Binti becomes connected with the *edan* through the current, does this make her a cyborg? What is a cyborg anyway, and in what way is it related to the military? How does connection lead to understanding? When does it lead to tension (both in the novel and beyond)? What happens to the idea of boundaries here, for example: boundaries of bodies or nations or "ethnic groups" or languages or capacities? Which interests are served if we imagine the body as bounded, and the human as only human? What difference does it make to our understanding of multispecies beings if we say Binti has become "part Meduse" or if we say she has become "also Meduse"? What "parts" are we made of? And can we split them up or are they

entangled? Can any words in our vocabulary capture the idea of more-than-one thing being one? Why would Binti contemplate that the *okuoko* were “ugly”? In what way are they “natural looking”? What does it mean to look natural? Who decides, and on what basis? In what ways are our bodies today entwined and entangled with the more-than-human (e.g. materiality, animals, microbes, environment or technology like spectacles, smartphones, or the bacteria in our stomachs)?

The *edan* is a little stellated cube-shaped object covered by strange symbols, loops, swirls, and fractals that Binti found in the desert, but whose functions have been lost. Talking about this *edan* that merges with Binti, we discuss posthumanist and sociomaterialist theories in educational theory (Gourlay, 2021; Sørensen, 2009). We reflect on higher education initiatives which aim to “enact new, resistant ways of playing at the boundaries of the human and machine” by communicating with or (re-)programming bots (Bayne, 2015), and explore the interdependencies and responsibilities enacted. We also read Karen Barad (2007), Donna Haraway (2016) and Bayo Akomolafe (2017) for new vocabularies that try to capture relationality without resorting to words such as “hybrid”, merging, blending, interaction or entwined (which still presuppose that at least two beings are separate before they merge, blend, interact or become entwined). For instance, with Barad, we have *intra-action*, becoming through action. With Haraway, we have *sympoiesis*, becoming-with (which has inspired work on the messy daily practices of “symmation” to contest fantasies of all-powerful “automation” in education; see Wagener-Böck et al. (2022)). With Akomolafe, we have the urgency of slowing down and rejecting claims of independence, human superiority, or solutionism.

### Decolonising knowledge

Decolonising knowledge sits at the heart of *Binti*. The world-making of this speculative fiction invites readers to see a university far beyond our contemporary colonial institutions of higher education. In the following extract, Binti has just reminded the assembled professors (human and other-than-human, including Haas, “like a spider made of wind”) that the Meduse chief’s stinger is in the university’s weapons museum. She

proposes that if they return the stinger, they will stop further bloodshed. Okorafor (2015) narrates:

I was sure they would agree. These professors were educated beyond anything I could imagine. Thoughtful. Insightful. United. Individual. The Meduse chief came forward and spoke its piece as well. It was angry, but thorough, eloquent with a sterile logic. 'If you do not give it to us willingly, we have the right to take back what was brutally stolen from us without provocation,' the chief said.

After the chief spoke, the professors discussed among themselves for over an hour. They did not retreat to a separate room to do this. They did it right before the chief, Okwu, and me. [...] Feet away from us, beyond the glass table, these professors were shouting with anger, sometimes guffawing with glee, flicking antennae in each other's faces, making ear-popping clicks to get the attention of colleagues. [...]

Finally, the professors quieted and took their places at the glass table again. [...] The spiderlike Haas raised two front legs and spoke in the language of the Meduse and said, 'On behalf of all the people of Oomza Uni and on behalf of Oomza University, I apologize for the actions of a group of our own in taking the stinger from you, Chief Meduse. The scholars who did this will be found, expelled, and exiled. Museum specimen of such prestige are highly prized at our university, however, such things must only be acquired with permission from the people to whom they belong. Oomza protocol is based on honour, respect, wisdom, and knowledge. We will return it to you immediately'. (p. 76ff.)

Who profits from the stinger in the museum? Does this scene enact restorative justice? What makes someone seem educated? What difference to knowledge does it make to debate in front of guests and onlookers rather than retreating to a private room? What modes of knowing does retreating, when only the final decision is shared in public, legitimise? And which modes of knowing, which epistemologies, which ways of imagining are repressed in this process? What power does translation have? Which beings are speaking beings in *Binti*? Does this power of language destabilise ideas of human exceptionalism? How do *Binti* and the Meduse chief claim rights and redress here? What would happen in our local contexts if stolen artefacts were returned? How does Haas's statement shift understandings of who has the right to know and to ownership?

At this stage, we might read articles about Okorafor's work (Crowley, 2019; Davis, 2020; Hanchey, 2020). Some students may decide to read

the second and third novellas in the *Binti* trilogy, which include further scenes of decolonising higher education. For example, when Binti learns more about the *edan* from the Indigenous “Desert People” than the university can teach her, or when animals inform people (Okorafor, 2017a, 2017b). We could consider the difference Halberstam proposes between “learning” as the consumerist mode of thinking that institutions require of students, and Harney and Moten’s “study” — a “mode of thinking with others separate from the thinking that the institution requires of you” (Halberstam in Harney & Moten, 2013). We could then reflect on our role in this seminar, in which the educator-as-institution requires a particular mode of thinking from the students, and whether students can resist this within the institution. We could consider how Binti invites us to exceed that mode within the institution of higher education, or to rethink the future of higher education beyond specific modes of thinking. These considerations would be against the backdrop of decolonial thought (Escobar, 2007; Mignolo, 2009; Quijano, 2010).

## Imagining futures

Engaging with selected publications on each of the four themes above, our hope is that students can connect with Binti and through her story relate to the theoretical literature in a more locally situated storied way. But by doing this through science fiction rather than through stories from our “own” lives, we can explore, experiment, reflect, refract, critique, share and generate ideas in new planetary or galaxy-wide ways.

After these initial weeks of intense reading and reflection on the key issues through Binti’s story, the seminar becomes a workshop. We engage more thoroughly with Chavez’s and Lerman’s approach (see above). Students spend the rest of the semester working on projects. They develop ideas that reshape the future of higher education. These can be realistic or speculative social science fiction — they can be utopias, dystopias, or mixed forms. Students can work together on a shared idea or support each other to develop individual visions. They research, exchange ideas on how they envisage higher education for good and prepare their stories. Each week, the group hears from a small number of students, and “workshop” their ideas, with generous feedback as described above (Chavez, 2021). Staying in the storytelling

mode, students write up these projects as social science fiction (Lackey, 1994).

We imagine student projects that are directly inspired by *Binti* to include *sustainability* (with technology which does not become obsolete, like the astrolabes built to last a lifetime) (Okorafor, 2015, p. 34), *commons* (which can be strengthened by designing for open, transparent platforms and spaces for debate in a knowledge commons in which everyone can participate or listen in, rather than today's confidential academic leadership meetings or publications behind paywalls; see the scene above), and ideas of *becoming planetary* or *becoming galactic* (when the connections among living beings on earth and across the galaxy become visible through, for example, *Binti's okuoko*, or biotechnology like the living *Miro 12* spaceship (Gabrys, 2018; Mbembe, 2022)).

Further issues might include learning analytics and artificial intelligence which can range from dystopian visions of total surveillance to ethically designed convivial technologies, co-developed with participants, degrowth scenarios of slow scholarship with time for thinking and growing, design justice implemented across educational institutions, digital nomads who remove themselves from national solidarity systems, behaviourist futures, open science, or transhumanism (some of these futures are developed in Knox et al., 2019; Macgilchrist et al., 2020; Vetter, 2023).

## Concluding thoughts

How does this seminar speak to higher education “for good”? Our aim was a classic one: to find new ways to invite students into conversations about urgent issues in higher education. The novella is short but rich in ideas for the future of higher education. With *Binti*, we have a character who is relatable. Without basing the seminar on “our own” experiences, we have a story to “support students to imagine and make liveable futures on their own terms” (Facer, 2019b, p. 3).

Stories in themselves are powerful entities. Lying outside current priorities in education to have “impact” beyond the classroom. Even if the stories remain in the classroom, the participants will have experienced themselves as having the agency to imagine concrete futures — utopian, dystopian or mixed — through their creation of speculative futures



(Rodriguez, 2001). They will have highlighted issues, delved into research, prioritised ways of living, learning, and teaching. Their own future decision-making will be affected. But these “what if” futures can also live beyond the classroom to influence other decision-makers in education, from lecturers to the university leadership or educational policymakers. We envisage exhibitions of student work in university buildings, near the management offices, or printed on banners, hanging from trees across the campus or city. We envisage students presenting their stories to senior academics in meetings at the edges of senate meetings or ministry events. We envisage podcasts, videos, press releases to influence public discourse on what is possible, what is impossible, and what is necessary to reshape a higher education for good.

The justice hinted at in the title of this chapter goes far beyond reforms such as making higher education more inclusive. Bayo Akomolafe has described the current crisis in which the world finds itself as a reproduction of the slave ship, with enslaved Africans chained in the hold, and European slavers on the top deck. Yet despite their different experiences of this ship, they were all on “a vessel of destruction” (reported in Dabiri, 2021, p. 73). Dabiri (2021) describes Akomolafe’s position:

[I]nclusion today can be understood as access to the top deck of the slave ship. Inclusion is access to power in a system that is ultimately a tool of destruction. It is not enough to make exploitative systems more ‘inclusive’. Do we want to get on the top deck or do we want to destroy the goddamn ship? (p. 73)

This chapter set out a thought experiment to explore what might happen if theories important for higher education are brought together with the world-making of speculative fiction, in particular the kind of world-making seen in Africanfuturist, feminist or ecological science fiction that does not transfer today’s norms and conventions into a future time, but instead reconfigures power relations. The goal is to open spaces for imagining the future otherwise. For instance, by reconfiguring subjectivation, reinventing data platforms, recalibrating justice to human and more-than-human entanglements, or decolonising knowledge practices.

As Le Guin (1976/2019) has said, science fiction is rarely about the future, it is about the present. It offers educators the means to delve

deeply into today's imaginations of the future, and to support students to create stories about a liveable future. These "what if" futures may remain entirely speculative, and that would be fine. However, developing and sharing what-ifs is essential to reshape the discourse about higher education and to inspire those who are involved in making world-building decisions around the future of higher education, from presidents to students to educators.

### Afterword: "Dear Diary" — Selected confessions of my study abroad year

What will students make of this seminar? As noted above, it has not yet been taught. Taking creative liberty, we imagine the following could occur:

Dear Diary

Started a new class.

Completely over-prepared and read the required text *Binti* twice already. Okay, you got me. I cheated. It's on Audible. I read it with my *ears*, okay?

The professor told us how she felt like an outsider starting in university once upon a time. This helped me a lot, but I still mumbled through my class introduction. Should have said something about coming here from Ireland, on Erasmus this year.

In other news, a boy sat beside me who smelled really bad.

Yours,

C

Dear Diary,

Class today was about "subjectivation". I haven't tackled the readings yet beyond *Binti* itself. This is typical me. I start hyper-enthusiastic but fail to do the basics by week 2. I'm a bit disheartened.

Smelly boy did not sit near me, which was a plus.

Yours,

C

Dear Diary,

Today's class blew my mind. Professor Mac G and the others in the class are bursting with ideas. My head is spinning. Datafication: that feeling the University is sucking your soul. Binti gives her whole self over to it when she decides to go there. And that's me! When I'm in, I'm all in. But I also feel datafication is a kind of complicity somehow, not always something being done to us.

Crashed in the evening and ate 5.5 chocolate biscuits — managed to spit the last half in the bin.

Yours,

C

Dear Diary,

Today was *more than human*. This was my favourite day so far. The red clay (otjize) that Binti puts on her skin I just love. Sometimes, I feel like going outside and clawing my hands into the earth. When everything feels disconnected, unreal. This world of ideas... It's like the university makes us more than human, but I want to get back to being merely human sometimes.

And Binti is honouring tradition too. She is literally smuggling the soil of her homeland into the academy, on her skin and in her hair. And it's also the dirt — the shit you can't leave behind — the stuff that follows you around. You can honour that too.

I took notes: "Why would Binti contemplate that the okuoko were 'ugly'? In what way are they 'natural looking'? What does it mean to look natural?"

Wow... what is natural? We are obsessed with physicalism — with beauty. We're wired that way, I guess. We see and dream in bodies and faces. But then, we make it worse, with the stories we spin around bodies, those more-than-human vapours.

Overcame sugar cravings this evening by drinking seven glasses of water. I will be up peeing all night (and a demon all day tomorrow).

Yours,

C

Dear Diary,

Notes from class:

“...Consider how Binti invites us to exceed that mode within the institution of higher education”

“...rethink the future of higher education beyond specific modes of thinking.”

I felt like I was being spoken to directly, given the possibility that the forms of everything could be challenged, like we were being given a space for creativity and imagination.

We were split into pairs to work on our assignment. I chose my partner for the entire rest of semester... yep, you guessed it: smelly-boy.

Yours.

C

Dear Diary

I am really struggling with his highness of pong. He suggested we do a fanfiction of Binti for our assignment. I told him this could amount to cultural appropriation, but this was waaaay over his head. I find I am just explaining everything to him.

Renaming buildings after women, creating gender diversity in citation — are those necessary? *Hell yeah*. But is it sufficient? Will putting more women in STEM magically change boardroom cultures? How will we measure real change? How will we actually treat each other day to day?

Yours,

C

Dear Diary,

Today we learned about Felicia Rose Chavez. We are creating a democratic classroom. It's exciting! Also, it's terrifying. We can have a “mentor” that is any writing that inspires us — a book, a poem, a hip hop song, an anime comic. We choose whatever is right for us — a voice from home, from inside of us.

As you know dear diary, I am not much of a reader. I don't listen to anything cool music-wise, and I spend most of my time watching garbage on Netflix and YouTube that I WILL NOT be confessing to in class. So, I told s-b to get us a book. He brought in a book called "Dignity" by Donna Hicks (2011) (see Fig. 19.1). Under questioning he admitted to me that he has not actually read it and that he just took it from his parents' bookshelf. Reading between the lines, I think he is still living at home, which is interesting.

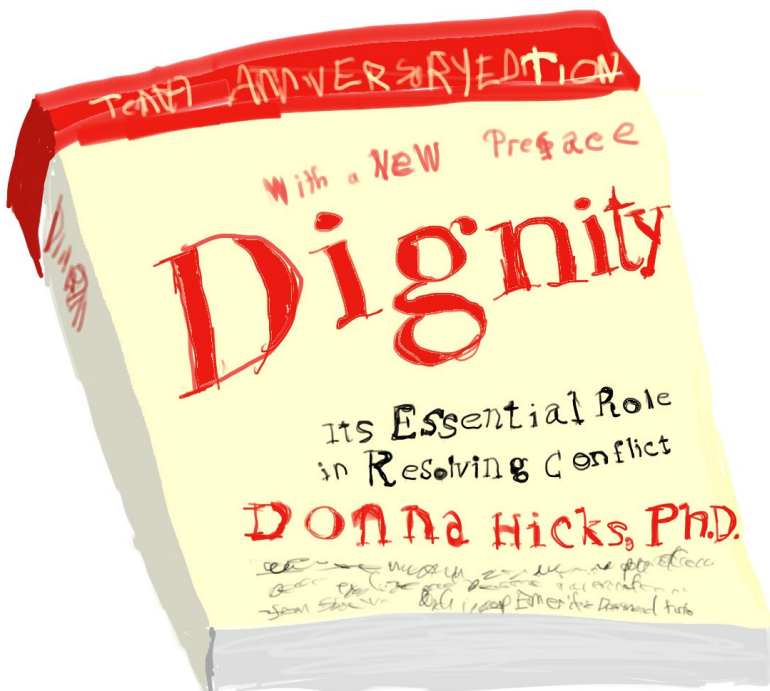
The book is good though. It has these principles based around affirming the dignity of another person. It would be perfect for our assignment actually. Recognising and upholding the dignity of others could be the underlying theme of a great story. We probably need a hero, a villain and... I guess a spaceship too. How hard can writing a story be?

Yours,

C

Figure 19.1

*Dignity. Image by Liam Costello, CC BY 4.0*



Dear Diary,

Affirming the dignity of another person... It sounds so inspiring, and it should be easy. It sounds like the right and good thing to do. But what does it actually mean?

Can I even uphold my own dignity?

This whole diary business — is it dignified? Or is it shameful? Would I let someone else read this?

Read about the white ceramic, coming closer, until I feel my head on the cold rim, fingers touching the back of my throat. Is it like that, just something compulsive?

And using unkind epithets, even here, where no-one sees, where everything is allowed to hurt... is that really okay?

Yours,

C

Dear Diary,

I had a weird dream. I was the dreamer but then I was also the one who dreamed of me. I was talking to Catherine Cronin, in London, about a book. The Good Book. It was actually many books, all full of the good. They were lined up on huge shelves in front of me. I was neither a man nor a woman and I was Binti too somehow (see Fig. 19.2). My dreadlocked hair flowed about me, pulsing luminous blue. Alive. And it was moving towards the books, reading the spines.

Yours,

C

Dear Diary,

We finally finished our story and read it to the class. I could hardly hear what was happening as my heart was pounding like a volcano. It went well! That's the main thing. Pure elation.

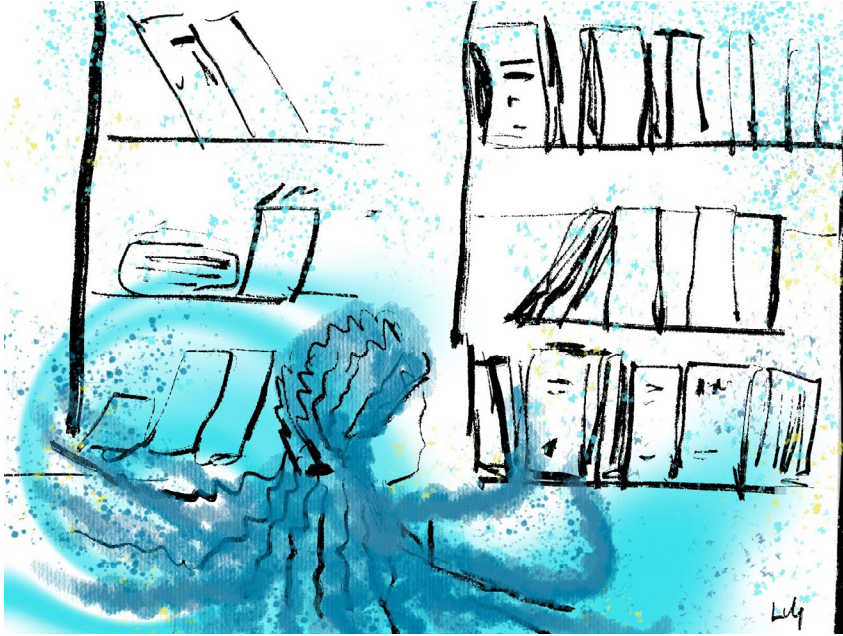
I couldn't smell him today which was weird.

Yours,

C

Figure 19.2

*Dreamer. Image by Lily (Prajakta Girme), CC BY 4.0*



Dear Diary,

I literally woke up today wondering how smelly boy lost his smell. Did he get the message and wash? Did I get covid? Am I immune to his pong now?

I leaned over closer to him during class, when he wasn't looking, and tried to sniff him. If anyone catches me doing this my life is over!

Yours,

C

Dear Diary,

I will miss Prof Mac G a lot I must say. And Binti too, who feels almost like a friend. At least I will be rid of smelly-boy. I am meeting him now to try and give him some last basic pointers on existence. He does not appear to have any friends — which is fine. I don't have ten zillion friends myself,

but the problem is *he doesn't care* that he has no friends — which is just plain weird (and kind of liberating).

So, I'm trying to teach him some basic social skills. And, when he is not looking, maybe sniff him — ha ha!

Yours,

C

## References

- Amiel, T., Pezzo, T., Cruz, L. R. da, & Oliveira, L. A. (2021). Os modos de adesão e a abrangência do capitalismo de vigilância na educação brasileira. *Perspectiva*, 39(3), 1–22.  
<https://doi.org/10.5007/2175-795X.2021.e80582>
- Andreotti, V. O. de, Stein, S., Suša, R., Čajkova, T., d'Emilia, D., Jimmy, E., Calhoun, B., Amsler, S., Cardoso, C., Siwek, D., & Fay, K. (2019). *Gesturing towards decolonial futures global citizenship otherwise study program*.  
<https://decolonialfutures.net>.
- Anonymous Author. (2016). Data colonialism: Critiquing consent and control in “Tech for social change”. *Model View Culture*, 43.  
<https://modelviewculture.com/pieces/data-colonialism-critiquing-consent-and-control-in-tech-for-social-change>
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.
- Bayne, S. (2015). Teacherbot: Interventions in automated teaching. *Teaching in Higher Education*, 20(4), 455–67.  
<https://doi.org/10.1080/13562517.2015.1020783>
- Beer, D. (2018). *The data gaze: Capitalism, power and perception*. Sage.
- Benjamin, R. (2019). *Race after technology*. Polity.
- Bernard, T. (2021). From didactics to datafication: A critical reflection on virtual learning environments and the production of space. *Journal for Students Affairs in Africa*, 9(1), 197–204.  
<https://doi.org/10.24085/jsaa.v9i1.1438>
- Bock, A., Breiter, A., Hartong, S., Jarke, J., Jornitz, S., Lange, A., & Macgilchrist, F. (Eds), (2023). *Die datafizierte Schule*. Springer.
- Brookfield, S. D., & Preskill, S. (2005). *Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms*. John Wiley & Sons.



- Brunton, F., & Nissenbaum, H. (2015). *Obfuscation: A user's guide for privacy and protest*. MIT Press.
- Butler, J. (1997). *Excitable speech: A politics of the performative*. Routledge.
- Castellví, J., Escribano, C., Santos, R., & Marolla, J. (2022). Futures education: Curriculum and educational practices in Australia, Spain, and Chile. *Comunicar*, 30(73), 45–55.  
<https://doi.org/10.3916/c73-2022-04>
- Chavez, F. R. (2021). *The anti-racist writing workshop. How to decolonize the creative classroom*. Haymarket Books.
- Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the world we need*. MIT Press.  
<https://design-justice.pubpub.org/>
- Couldry, N., & Mejias, U. A. (2019). *The costs of connection: How data is colonizing human life and appropriating it for capitalism*. Stanford University Press.
- Crawford, K., & Joler, V. (2018). *Anatomy of an AI system*.  
<https://anatomyof.ai/>
- Cronin, C., Zamora, M., & Bali, M. (n.d.). *Equity Unbound*.  
<http://unboundeq.creativitycourse.org/>
- Crowley, D. (2019). Binti's r/evolutionary cosmopolitan ecologies. *The Cambridge Journal of Postcolonial Literary Inquiry*, 6(2), 237–56.  
<https://doi.org/10.1017/pli.2018.54>
- Czerniewicz, L. (2022). Multi-layered digital inequalities in HEIs: the paradox of the post-digital society. *GUNI Report: New Visions for Higher Education towards 2030*, 1–8.  
<https://www.guni-call4action.org/article/multi-layered-digital-in-equalities-heis-paradox-post-digital-society>
- Dabiri, E. (2021). *What white people can do next: From allyship to coalition*. Penguin.
- Daly, A., Devitt, A. K., & Mann, M. (Eds), (2019). *Good data*. Institute of Network Cultures.
- Davis, E. S. (2020). Decolonizing knowledge in Nnedi Okorafor's Binti trilogy. In A. S. Moore, & S. Pinto (Eds), *Writing beyond the state. Post-sovereign approaches to human rights in literary studies* (pp. 43–63). Springer.  
[https://10.1007/978-3-030-34456-6\\_3](https://10.1007/978-3-030-34456-6_3)
- Dixon-Román, E., Nichols, T. P., & Nyame-Mensah, A. (2020). The racializing forces of/in AI educational technologies. *Learning, Media and Technology*, 45(3), 236–50.  
<https://doi.org/10.1080/17439884.2020.1667825>
- Dion, M. L., Sumner, J. L., & Mitchell, S. M. (2018). Gendered citation patterns across political science and social science methodology fields. *Political Analysis*, 26(3), 312–27.  
<https://doi.org/10.1017/pan.2018.12>

- Escobar, A. (2007). Worlds and knowledges otherwise. *Cultural Studies*, 21(2), 179–210.  
<http://www.unc.edu/~aescobar/html/texts.html>
- Facer, K. (2019a). *Learning to live with a lively planet: Renewing the mission of the European University* [Video]. Youtube.  
<https://www.youtube.com/watch?v=3zHml2ySV2w>
- Facer, K. (2019b). Storytelling in troubled times: what is the role for educators in the deep crises of the 21st century? *Literacy*, 53(1), 2–13.  
<https://doi.org/10.1111/lit.12176>
- Foucault, M. (1982). The subject and power. In H. L. Dreyfus, & P. Rabinow (Eds), *Michel Foucault: Beyond hermeneutics and structuralism* (pp. 208–26). Harvester.
- Gabrys, J. (2018). *Becoming planetary*. E-Flux.  
<https://www.e-flux.com/architecture/accumulation/217051/becoming-planetary>
- Gourlay, L. (2021). *Posthumanism and the digital university*. Bloomsbury Academic.
- Gutiérrez, M. (2018). *Data activism and social change*. Palgrave.
- Hall, S. (1997). The work of representation. In S. Hall (Ed.), *Representation: Cultural representations and signifying practices* (pp. 13–64). Sage.
- Hanchey, J. N. (2020). Desire and the politics of africanfuturism. *Women's Studies in Communication*, 43(2), 119–24.  
<https://doi.org/10.1080/07491409.2020.1745589>
- Haraway, D. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.
- Harney, S., & Moten, F. (2013). *The undercommons: Fugitive planning and Black study*. Minor Compositions.
- Hicks, D. (2011). *Dignity: Its essential role in resolving conflict*. Yale University Press.
- Holbert, N., Dando, M., & Correa, I. (2020). Afrofuturism as critical constructionist design: building futures from the past and present. *Learning, Media and Technology*, 45(4), 328–44.  
<https://doi.org/10.1080/17439884.2020.1754237>
- hooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.
- Iske, S., Fromme, J., Verständig, D., & Wilde, K. (Eds), (2020). *Big data, Datafizierung und digitale Artefakte*. Springer VS.
- Jarke, J., & Breiter, A. (2019). Special issue: Datafication of education. *Learning, Media and Technology*, 44(1), 1–6.  
<https://doi.org/10.1080/17439884.2019.1573833>

- Johnson, A. (Ed.), (2019). *Drones and dreams: A speculative sprint story collection*. Digital Asia Hub.  
<https://www.digitaliasiahub.org/publications/drones-and-dreams-a-speculative-sprint-story-collection/>
- Jungk, R., & Müllert, N. R. (1987). *Future workshops: How to create desirable futures*. Institute for Social Inventions.
- Knox, J., Williamson, B., & Bayne, S. (2019). Machine behaviourism: Future visions of “learnification” and “datafication” across humans and digital technologies. *Learning, Media and Technology*, 45(1), 31–45.  
<https://doi.org/10.1080/17439884.2019.1623251>
- Kwet, M. (2017). Operation Phakisa Education: Why a secret? Mass surveillance, inequality, and race in South Africa’s emerging national e-education system. *First Monday*, 22(12).  
<https://doi.org/10.5210/fm.v22i12.8054>
- Lackey, C. (1994). Social science fiction: Writing sociological short stories to learn about social issues. *Teaching Sociology*, 22(2), 166–73.  
<https://doi.org/10.2307/1318562>
- Le Guin, U. K. (2019 [1976]). *The Left Hand of Darkness*. Penguin.
- Lerman, L., & Borstel, J. (2003). Liz Lerman’s Critical Response Process: A method for getting useful feedback on anything you make, from dance to dessert. *Liz Lerman Dance Exchange*.
- Lipmanowicz, H., & McCandless, K. (2013). *The surprising power of liberating structures*. Liberating Structures Press.  
<https://www.liberatingstructures.com>
- Macgilchrist, F., Allert, H., & Bruch, A. (2020). Students and society in the 2020s: Three future “histories” of education and technology. *Learning, Media and Technology*, 45(1), 76–89.  
<https://doi.org/10.1080/17439884.2019.1656235>
- Macgilchrist, F., Hartong, S., & Jornitz, S. (2023). Algorithmische Datafizierung und Schule: kritische Ansätze in einem wachsenden Forschungsfeld. In K. Scheiter, & I. Gogolin (Eds), *Bildung für eine digitale Zukunft (Edition ZfE)* (pp. 317–38). Springer VS.
- Mbembe, A. (2022, January 11). *How to develop a planetary consciousness [Interview]*. Noema.  
<https://www.noemamag.com/how-to-develop-a-planetary-consciousness>
- Mignolo, W. D. (2009). Epistemic disobedience, independent thought and decolonial freedom. *Theory, Culture & Society*, 26(7–8), 159–81.
- Milan, S., & Treré, E. (2019). Big data from the South(s): Beyond data universalism. *Television & New Media*, 20(4), 319–35.  
<https://doi.org/10.1177/1527476419837739>

- Muñoz, J. E. (2019). *Cruising utopia: The then and there of queer futurity*. New York University Press.
- Okorafor, N. (2015). *Binti*. Tor.
- Okorafor, N. (2017a). *Binti: Home*. Tor.
- Okorafor, N. (2017b). *Binti: The night masquerade*. Tor.
- Okorafor, N. (2017c). *Sci-fi stories that imagine a future Africa*.  
[https://www.ted.com/talks/nnedi\\_okorafor\\_sci-fi\\_stories\\_that\\_imagine\\_a\\_future\\_africa](https://www.ted.com/talks/nnedi_okorafor_sci-fi_stories_that_imagine_a_future_africa)
- Okorafor, N. (2019). *Africanfuturism defined*.  
<https://nnedi.blogspot.com/2019/10/africanfuturism-defined.html>
- Parra, H., Cruz, L., Amiel, T., & Machado, J. (2018). Infraestruturas, economia e política informacional: o caso do google suite for education. *Mediações – Revista de Ciências Sociais*, 23(1), 63–99.  
<https://doi.org/10.5433/2176-6665.2018v23n1p63>
- Pink, S., & Postill, J. (2019). Imagining mundane futures. *Anthropology in Action*, 26(2), 31–41.  
<https://doi.org/10.3167/aia.2019.260204>
- Prinsloo, P. (2020). Data frontiers and frontiers of power in (higher) education: A view of/from the Global South. *Teaching in Higher Education*, 25(4), 366–83.  
<https://doi.org/10.1080/13562517.2020.1723537>
- Quijano, A. (2010). Coloniality and modernity/rationality. In W. D. Mignolo, & A. Escobar (Eds), *Globalization and the decolonial option* (pp. 22–32). Routledge.
- Raffaghelli, J. E. (2022). Alfabetización en datos y justicia social ¿Un oxímoron? Respuestas desde la contra-hegemonía. *Revista Izquierdas*, 51, 1–18.  
<https://dialnet.unirioja.es/servlet/articulo?codigo=8361359>
- Reh, S., & Ricken, N. (2012). Das Konzept der Adressierung. Zur Methodologie einer qualitativ-empirischen Erforschung von Subjektivierung. In I. Miethe, & H. R. Müller (Eds), *Qualitative Bildungsforschung und Bildungstheorie* (pp. 36–55). Barbara Budrich.
- Ricken, N., Casale, R., & Thompson, C. (Eds), (2019). *Subjektivierung. Erziehungswissenschaftliche Theorieperspektiven*. Beltz Juventa.
- Rodriguez, C. (2001). *Fissures in the mediascape: An international study of citizen's media*. Hampton Press.
- Särkelä, E., & Suoranta, J. (2020). The method of empathy-based stories as a tool for research and teaching. *The Qualitative Report*.  
<https://doi.org/10.46743/2160-3715/2020.4124>
- Selwyn, N., Hillman, T., Eynon, R., Ferreira, G., Knox, J., Macgilchrist, F., & Sancho-Gil, J. M. (2020). What's next for ed-tech? Critical hopes and concerns for the 2020s. *Learning, Media and Technology*, 45(1), 1–6.  
<https://doi.org/10.1080/17439884.2020.1694945>

- Sørensen, E. (2009). *The Materiality of learning: Technology and knowledge in educational practice*. Cambridge University Press.  
<https://doi.org/10.1017/CBO9780511576362>.
- Suoranta, J., Teräs, M., Teräs, H., Jandrić, P., Ledger, S., Macgilchrist, F., & Prinsloo, P. (2021). Speculative social science fiction of digitalization in higher education: From what is to what could be. *Postdigital Science and Education*, 4(2), 224–36.  
<https://doi.org/10.1007/s42438-021-00260-6>
- UNESCO (2021). *Reimagining our futures together: A new social contract for education*.  
<https://unesdoc.unesco.org/ark:/48223/pf0000379707.locale=en>
- Vetter, A. (2023). *Konvioiale Technik. Empirische Technikethik für eine Postwachstumsgesellschaft*. Transcript.
- Wagener-Böck, N., Macgilchrist, F., Rabenstein, K., & Bock, A. (2023). From automation to symmation: Ethnographic perspectives on what happens in front of the screen. *Postdigital Science and Education*, 5(1), 136–51.  
<https://doi.org/10.1007/s42438-022-00350-z>
- Wallin, A., Koro-Ljungberg, M., & Eskola, J. (2019). The method of empathy-based stories. *International Journal of Research & Method in Education*, 42(5), 525–35.  
<https://doi.org/10.1080/1743727X.2018.1533937>
- Williamson, B. (2018). *Big data and education*. Sage.
- Youdell, D. (2006). Subjectivation and performative politics: Butler thinking Althusser and Foucault: intelligibility, agency and the raced-nationed-religioned subjects of education. *British Journal of Sociology of Education*, 27(4), 511–28.
- Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. Profile Books.

