

'Social Infrastructures' at the Nexus of Education and Justice

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Abstract

This chapter shares the experiences of creating a course at the University of Cape Town in South Africa in Engineering and the Built Environment. The course is set against the backdrop of education as a form of colonial violence in South African history. This chapter provides insight into the development of the course, the experiences of the students and a reflection from the authors as they navigate their own identities, and power within a contested space of higher education.

Keywords

built environment – co-creation of knowledge – course development

1 Introduction

Injustice in education has a long history in South Africa. Colonisation was the vehicle through which formal education was introduced within South African society. As with other settler colonies, formal education was introduced through religion, by missionaries responsible for setting up schools and 'civilising' the natives. This moment of inception of formal education thus became the moment of violence and inherent injustice in establishing a formal academic programme in South Africa. South Africa has continued to struggle with this history. Education (formal) was central to the development of 'civilisation' in the name of progress and modernisation (coloniality) (Mignolo & Walsh, 2018). Modernisation as the basis of coloniality has meant that education became the signifier of colonial difference and is the foundation for injustice and inequality at the heart of the South African education system. Coloniality and the inherent injustice continues to thrive in academic institutions in South Africa, hence the students' call for decolonisation of higher education.

As academics, we too are presented with the challenge to decolonise the university. Decolonial authors such Maldonado Torres (2016) and Ndlovu-Gatsheni (2018) have made persuasive arguments for decolonising higher education and has asked us to confront epistemicides that have long plagued South African universities. Decolonial authors advocate for the acknowledgement and inclusion of multiple epistemologies. Similarly, Tandon and Hall (2017) challenge us to reimagine knowledge. They call on us to foster a knowledge democracy that has multiple purposes. Knowledge does not only exist as empirical evidence in the development of science, it should also act to intervene within society, shaping relationships between multiple stakeholders but, in particular, communities and universities. Multiple-stakeholder engagement and the notion of the pluriverse is an acknowledgement that multiple knowledges and ‘ways of being’ are central to refocussing the university. This means that having multiple locations as sites of knowledge-making as well as multiple formations of who constitutes the student and the teacher are pivotal to redesigning and then integrating multiple epistemologies and the different ways of being. Central to the reconfiguration of knowledge and being is a reconfiguration of power.

Social Infrastructures is a conceptual framing that enables us to examine structural inequalities, community-engagement, co-creation of knowledge and active citizenship. It includes a rethinking of knowledge-generation; community lived experiences as knowledge and community members as experts; and an inclusion of social identity practices that are embedded within structural systems of inequalities. This chapter offers a case study of an undergraduate course taught in the Engineering and Built Environment (EBE) faculty at the University of Cape Town (UCT), which has attempted to provide an opportunity for students – as students, as emerging professionals, but also as citizens – to engage with many of these issues. The course is called ‘Social infrastructures: Engaging with communities for change’ (S1). In particular, we will reflect on three key principles – knowledge co-creation; community engaged learning and teaching; and active citizenship – that have shaped the course and its development over the past 8 years, and have helped us to articulate an understanding of the concept of social infrastructure.

We will show how the course – located at the nexus between education and justice – is intentionally ‘engaging the social’ context in which students will work as professionals. It is through this intentional focus on the social – framed by considerations of social justice – that the possibility of building social infrastructure emerges. Finally, this, in turn, implies that development and any other form of engagement cannot be examined without considering the needs of people and of communities, understanding the contexts in which

they live and work. In our context in South Africa, this means engaging deeply with issues of power and systemic inequality.

We have chosen to make visible both of our voices in the chapter – Janice, who is the original course and curriculum developer, and Benita, who has taken over the course in the past year. We are doing this for two reasons: to allow for authenticity in each of our voices and also to make transparent the relationship between lived experience, engagement with issues of transformation and decoloniality, and how these, in turn, are reflected in educational practice. Our different positioning in relation to the decoloniality project is important. Janice identifies as white, upper middle class, with a background in adult education and community engaged teaching and research and who, more recently, is increasingly seeking opportunities to get involved in work on whiteness, given the prevalence of racism in South African higher education; Benita is a cis-het, black, middle-class womxn, just entering higher education (as an academic) as a field and institution. Her work has focussed on intersectionality, particularly exploring race and gender, and, increasingly, decoloniality.

2 Case Study – Social Infrastructures: Engaging with Communities for Change

As part of the engineering curriculum in South African higher education, students must demonstrate multidisciplinary work and understand the impact of their decisions on the personal, social, and cultural values and requirements of those they affect and interact with, including at least one humanities elective as part of their degree. These are the requirements of the Engineering Council of South Africa (ECSA), which is the accrediting body for engineering degrees country wide.¹ At the time of the origin of the course (2011), UCT had reimaged its mission and vision, and there was a call to ensure that students graduate as critical citizens who could work for social justice. These factors led to the development of the SI course that ran for the first time in 2013, with 33 students. The course was developed via a partnership between the EBE faculty and UCT's Global Citizenship (GC) Programme, with Janice involved in both.

In deciding on the course name, the term 'social infrastructures' was seen as both strategic and also useful in a broader political sense. It would hopefully attract engineering students, but also indicate a particular view of the relationship between professionals and their broader context. The term 'social infrastructure' varies in meaning across different contexts; in this course, it was used to reflect a recognition that urban development is a sociotechnical process, giving rise to particular relationships between households and

communities, and between materials and technologies, shaped by the institutional and political context. This implies that professional knowledge and skills do not exist outside of broader socio-political processes, including issues of inequality and social justice. The SI course was thus deliberately designed and framed to interrogate and engage the nexus between the technical and social domains of learning and knowledge, something that is increasingly important in understanding the design of curriculum and pedagogy in professional degree programmes.²

The pedagogic approach in the course has been influenced by Janice, the course convenor for all versions of the course up until 2019. Given her background in adult and popular education, critical pedagogy and community engagement, the course combines classroom-based learning and critical reflection with community-engaged, experiential learning through learning exposure visits. Historically, the course was designed in two parts. Part 1 introduces students to some of the key concepts and processes of learning and engagement that might assist us in understanding how to think about engagement with off-campus constituencies. These include concepts of community, the problem of “single story” or one-sided perspectives and paradigms of engagement, and the process of community engagement itself. The focus is, therefore, on learning about engagement and about the self (as student, professional and citizen) in the engagement process.

The second part of the course is designed around a series of key challenges facing cities and communities. It is less about in-depth theoretical content or knowledge linked to the issues and more about how the particular issue is reflected in social infrastructures. Taught by faculty leaders in their fields, themes include infrastructure and social change; urban food security; cities and climate change; water, sanitation, and service delivery; and sustainable urban development.

Inherent in the framing of the SI course is the understanding that students are present in three intersecting identities: as a student, as an emerging professional and as an active citizen. This framing enables the students to engage with a more complex self; with other students in new ways; and with community partners as citizens. This, in turn, allows for a more challenging understanding of knowledge, of knowers and of the relationship between technical-professional knowledge and social-citizen knowledge. Such an understanding is reflected in the assessment practices on the course. Continuous assessment is valued; reflective, critical writing welcomed; and there is no exam.

Knowledge co-creation, community engaged learning, and social justice are key aspects of the course’s pedagogical orientation, as they offer the potential to reformulate knowledge as an intervention to further social justice ideals

(Carpenter, 2015). However, it cannot only be the curriculum that reflects an engaged orientation – engagement needs to be present in the pedagogical relationship as well. A curriculum for engagement “can only be brought off consistently, can only engage the students [...] if engagement is present in the pedagogical relationship” (Barnett & Coate, 2005, p. 128). This, in turn, means that teaching in this context requires that not only students, but educators as well need to engage with the past, and with how the past has shaped one’s complex identity, revealed in the present.

2.1 *Impact on Students*

Over the years, many students have commented on the impact the course has had on them, and their own understanding of what it might mean to be a professional engineer. For many of them, it reminds them of why they wanted to study engineering in the first place – they deeply value the experiential/action learning. Others valued being exposed to new ideas and having an opportunity to express these ideas, or getting a different and more complex understanding of community. Below are excerpts from some student comments across the years:

We interrogated the concepts of community, citizenship and even bilateral knowledge exchanges between the community and engineer. What I had expected to be a short community project course progressed as an intriguing discussions course, intellectually thought provoking and [a] morally educating experience. (Student, 2015)

The [...] course has allowed me to explore ideas and gain a sensitivity which cannot be taught. As a Civil Engineering student, I have found that we occupy a very interesting space in that we have to be technically minded while appreciating that our endeavors, once we are in the work environment, shall have a direct impact on people’s lives. [The course] has allowed me to re-examine where I see myself within the world and critically evaluate the ideas I have about development, and those we so often unjustifiably see as the ‘Other’ when we think about such engagements. It has challenged this thinking and subtly appealed to my sense of humanity, leading me to resist a gung-ho approach to issues of social justice. (GC/SI facilitator 2013)

2.2 *Learning of the Engineering Faculty*

In 2016, the SI course was awarded the Collaborative Educational Practice Award at UCT. The award criteria as well as reflections of colleagues in the engineering faculty who have taught on the course over the years are presented below:

[I was invited] in 2014 to participate in the “*Social Infrastructures: Engaging with communities for change*” course which I have been involved in since then. It has been a tremendously enriching experience for me. [The course does] an amazing job of the very difficult task of drawing teachers and researchers from different disciplinary backgrounds into a conversation about how to get students to think holistically about urbanisation challenges and appropriate responses to them. [The course’s] commitment to a community-engaged pedagogy, development, learning and advancement of all participants in the programme – from the students to the community partners, facilitators and teachers – is truly inspiring. [...] [The course] provides students with an amazing combination of both solid theory in the classroom as well as practical exposure and engagement with the world beyond the university. (Dr Mercy Brown-Luthango, African Centre for Cities)

[Designing the course] was a major challenge – how to make the bridge from the very technical courses, which occupy most of the EBE undergraduate curricula, to concepts of society, citizenship and community in the SI course? This is very much a first for most EBE students. Yet [...] the first half of the course is designed in a way that students are clearly able to grasp these ideas. The community engagement parts of the course, where students work together with an intermediary NGO to relate directly to communities in Cape Town, is also challenging. [...] [The course] manages to deal with a large group of students undertaking these visits [...] in a sensitive and meaningful way. The last part of the course, which brings in lectures on the bigger issues which EBE students face (climate change, urbanisation, food insecurity, etc.) is also very well designed and integrated with the help of additional tutored sessions and discussions. (Professor Vanessa Watson, School of Architecture, Planning and Geomatics)

In addition, the success of the SI spawned the development of second course in the Engineering faculty called ‘The Citizen Professional’. This course ran successfully for the first time in 2019 and was very well received by students and faculty. Lastly, the SI course, in some senses, is a case study for future collaborations between the GC programme and other faculties, with interest emerging out of the Faculty of Science recently.

2.3 *Field Narratives, Anecdotes/Stories*

The off-campus classes are a very significant part of the learning for many students. Not only do they expose them to communities and activists in the greater

Cape Town they might not otherwise have had, these classes are also powerful learning spaces and opportunities for understanding the importance co-creation of knowledge. Below is an extract from a student's final learning review paper. In this extract from her essay, Thandi Mpompo³ understands properly, for the first time, what an Environmental Impact Assessment (EIA) is, a concept she had heard about in her campus class but not fully understood.

This course was a completely new experience in all ways possible. Now that we [are] at the end of the course I can't help but realised how ignorant I was about a lot of things. Starting with the whole community engagement concept. I used to see people do what we did in this course. Go into people's communities to learn and so on. But, before this course, I found the whole concept of strangers going into others personal space to use them as study objects very rude and invasive. Frankly, this was because I didn't think this kind of learning existed and why it was needed. However, in my first off-campus class to Philippi Horticultural Area (PHA), the need for this type of learning and its existence got answered through my own experiences [...]. Once [land activist and course partner] Nazeer started talking and I listened, I found myself transitioning into many different roles throughout his discussions with us.

Then Nazeer started talking about the Environmental Impact Assessment (EIA) process and how it plays a crucial role in the outcomes of the decision-making process. Here I slipped into a chemical engineer, because this is what they teach us in one of the courses. He brought all of the theory that I have learned in that course as a chemical engineer to [life]. I found myself very excited thinking that maybe, just maybe, if they could bring people like Nazeer to talk to us in class when we cover topics like this, we would realize what a crucial role we play. We would maybe be more aware of what's happening beyond the scope of the classroom, and this will produce engineers that can help people like Nazeer. [Because], honestly, before this course, EIA was just a concept I had to cram for the exam, and it's funny how it took this course to make me take it seriously. I even went to one of my lectures to enquire why we don't use local case studies in our course materials, but [rather] Western material that we will never actually encounter, and all [the instructor] could say was that it's harder to set questions from scratch as an examiner – it leaves room for many errors – so they just use standard questions. This off-campus class stirred up many questions and truly got me thinking. There is honestly nothing as effective as experimental learning. Where one gets to slowly unpack concepts through experience and discussions. [...] [Doing] this

course makes me more conscious about what is happening outside the limits of plant layout. Given the opportunity, I will defiantly be that change driver in my workplace in future, educating and enforcing my company to be more conscious of the community that surrounds the company and how the company's actions affect these communities.

After the course was over, the student gave permission for her paper to be sent to Nazeer so that he could use it as material to support the important role the PHA plays not only in struggles over land, but in the education of future professionals. He put it up on his Facebook page, reinforcing the importance of knowledge co-creation. An additional unintended consequence was that the bursar of the student was also a PHA supporter and saw her paper up on the PHA Facebook page⁴ and liked it. Field experiences are critical in contexts like this.

3 Situating Social Infrastructure at the Nexus of Education and Justice

Knowledge democracy and multiple epistemologies open spaces for students to draw on and begin to articulate different knowledges. The course is designed to demonstrate that these different knowledges have value and must be valued, across graduate learning. Co-creation as a decolonising method is vital to reimagine the place of community, society and university. In this course, co-creation opportunities take place in the teaching team, in the classroom through peer-to-peer engagement and with community partners both on and off campus. Knowledge is at the heart of transformative action, yet it is not only knowledge-co-creation – it is also the 'coloniality of being' that must be re-imagined. Active citizenship as a concept, linked to neoliberal understandings of democracy, as a framing and destination for students on the course, must be troubled.

A decolonial lens requires a different understanding of citizenship and way of structuring learning and being. Articulating a decolonial lens as underlying the critical pedagogical approach, the course has to further engage concepts of community, knowledge and justice, both within and outside the classroom. This means that concepts of social solidarities have to become integrated as a core concept. This is important because a decolonial lens requires a move away from a neoliberal notion of individualised (active) citizenship. Social solidarities signals a move away from individualised identities (active citizenship) and narrow identity politics (positionality) that maintain an uneven higher education landscape. Social solidarities requires a grappling with a political

and social consciousness that shed light on the structural violence inherent within formations of race, class, gender, sexuality, ability, etc. The work of theorists such as Du Bois (1903), Fanon (1967), Biko (1978), Anzaldúa (1987), hooks (1989), and Erasmus (2000) amongst others, help us think about 'ways of being' as inherently political, and the power relations between knowledge generation, community engagement, and 'ways of being' must be acknowledged to confront and address structural violence within higher education. Social solidarities is about building bridges, connections and linkages between historical injustice and the role of the university. This will fundamentally shift the notion of a university as separate from history and separate from communities.

Social responsibility, as a call to action within a decolonial context, requires a radical commitment to the transformation of knowledge, practice and power, for educators, students and community partners alike. This is challenging, as it requires that the university also needs to respond to historical injustice from a place of collective effort and action. Within South Africa, this means that social responsibility, including community engagement within universities, must engage with the complexity of change. It is insufficient to understand our own positionalities and then neglect the collective privilege that is enabled because of our positionalities. We have to foster collective solidarities that encourages an overhauling of the hierarchy of knowledge and knowledge-generation, including redistributing resources in a way that strengthens community engagement and participation in teaching and learning.

4 Conclusion

This chapter has argued that a more critical, decolonial lens, shaping processes of knowledge co-creation and framed by social justice principles, is needed to inform teaching and learning practice in higher education if we are to challenge the neoliberal, reformist and colonial project. The reconfiguration of power, knowledge and being in higher education institutions will require us to act decisively in shaping our work anew, forging alliances across political and historical boundaries and relinquishing 'old, tried and tested' ways of engaging within the university. We have seen, in the South African context, that political transformation, with the ushering in of a democratic government in 1994, has not significantly changed the power structures of higher education institutions. Change has been slow. The slow pace of change urges us to act swiftly to decolonise higher education in the ways that we have grappled with in the Social Infrastructures course as well as transferring what this means for teaching and learning, research and social responsibility across the university. It is

only when we do this that we can hope to provide a space for the building of social infrastructure that considers the needs of people and communities in the context of dismantling power and systemic inequality in South Africa, where this case study is located.

However, challenges are not only about curriculum and pedagogy – as educators, we too need to reflect deeply on the practices we create. We end this chapter with a brief reflection on our different positioning to the system of domination and colonialism, of which we are all a part. This resulted in tensions in the writing of the paper, but we thought important to surface as part of contributing to the decolonial project itself. We therefore end off with some autobiographical reflections, indicating our thoughts about the education project to which we are both committed.

4.1 *Postscript*

4.1.1 Janice

I understand curriculum and pedagogy to be about more than epistemology or knowledge. I also build an *ontological* or ‘self-work’ dimension into my work at all times, in order to do what Parker Palmer (1997) refers to as “inner work”, surfacing the “tangles” or challenges of teaching “so that [I] can understand them better and negotiate them with more grace, not only to guard [my] own spirits but also to serve our students well” (pp. 14–21). This is more critical than ever in a post RMF/FMF (#RhodeMustFall/#FeesMustFall) space. However, because of my positioning as a privileged white, upper middle class woman who benefitted from Apartheid, I understand that I might design educational spaces that alienate, oppress and silence. Because of this, I have argued elsewhere that to have integrity in my role as educator requires of me to be willing to step back from preconceived ideas of the academic project and where appropriate, acknowledge [my] complicity in the decisions that are made that shape the learning of our students. It requires, in other words, a change from within, and ... this [in turn] means a challenging of the structures where decisions are made that reinforce the education of technically excellent but socially and politically dislocated and disinterested student-citizens. (McMillan, 2017, p. 166)

Finally, I was deeply challenged by a critical black scholar on our campus recently who came to address a seminar on the topic of ‘Reason and unreason: Pedagogies of the oppressed in the twenty-first century: Gender, philosophy,

education and the law'. When asked by another critical black scholar 'How do we know if/when someone has transformed', she answered with a provocative question, one I found challenging yet profoundly useful. She said 'ask yourself: what is my relationship to the system of domination of which I am a part? Do I uphold it/perpetuate it or do I confront it?' It is questions such as these that I will strive to take into the heart of my teaching in the classroom.

4.1.2 Benita

A decolonial lens that links knowledge, power and being is central to my role as a teacher and an academic. Entering UCT has been a painful reminder that black lives have not mattered in the design and culture of higher education institutions. Now, being in the classroom and observing black students' uncertainty about belonging 'in this place' (no matter how smart they have been told they are), saddens me and guides me towards the articulation of a decolonial approach to teaching that is affirming of black students and uncompromising in orientation. A decolonial approach that recognises the trauma imposed through the structural violence of white supremacy. A decolonial approach that welcomes and embraces 'ways of being' that have been rejected 'in this place'. A decolonial approach that integrates my roles as an activist and an academic who constantly has to push the boundaries to include community and marginalised voices. But it cannot end here – my role and practice have to engage the structural systems of higher education that still want to 'keep black people out', that still question the practices of blackness that are so 'foreign' to the academic gatekeepers. We cannot only teach good courses, we have to be better academics committed to changing the culture wherein we learn, teach and research, so that a just education is not dependant on individual ability, but rather provides a basis for the most marginalised to flourish.

Notes

- 1 While it is beyond the scope of this chapter to discuss details of the degree structure in South Africa, it is important to note that we inherited the British system's emphasis on learning through the disciplines. This means that there is little, if any, opportunity to develop broad general education courses.
- 2 The course has proved popular – since its inception in 2013, over 600 students have taken the course, with the course being fully subscribed with 100 students since 2015.
- 3 Name and extract used with permission of the student.
- 4 The Facebook page can be accessed at: <https://www.facebook.com/PHAFoodFarmingCampaign/posts/643539475821484>

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