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Open Textbooks and Social Justice: Open Educational Practices to Address Economic, Cultural and Political Injustice at the University of Cape Town

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There is currently a clarion call to address social injustice in South African higher education (HE) in order to achieve greater equity in access. Within this context, current social injustices pertain to financial exclusion as well as epistemic marginalisation and are embodied in the predominance of expensive textbooks which are authored in the Global North, meaning that they are unaffordable for many students and do not represent local realities.

This paper provides evidence from the Digital Open Textbooks for Development (DOT4D) project at the University of Cape Town (UCT), on the potential of open textbooks to address social injustice in South African HE and the practices utilised by UCT staff to address these challenges.

The paper uses Nancy Fraser's (2005) trivalent lens to examine inequality, specifically as relates to the following dimensions: economic (maldistribution of resources); cultural (misrecognition of culture and identities); and political (misrepresentation or exclusion of voice). This enables the authors to critically analyse the UCT context and the extent to which open textbook production as well as open education practices within the classroom promote social justice through "parity of participation".

The findings presented demonstrate that open textbooks have the potential to disrupt histories of exclusion in South African HE institutions by addressing issues of cost and marginalisation through the creation of affordable, contextually-relevant learning resources. In addition to this, they provide affordances which enable lecturers to change the way they teach, include student voices and create innovative pedagogical strategies.

Keywords: open textbooks; pedagogy; social justice

Introduction: Current social justice imperatives in the South African higher education system

In the period 2015–2017, the #RhodesMustFall¹ and #FeesMustFall² protests rocked South African universities. Protestors were animated by two central demands: the decolonisation of higher education institutions (HEIs) and the provision of free education. Essentially, these "Fallist"³ movements called for the dismantling of institutionalised obstacles that limit the full, equal participation of students and staff in South African higher education (HE). While the Fallist protests have largely abated – in part due to the national government's decision to provide subsidised free higher education for poorer students (DHET 2018) – the national HE system remains highly inequitable in general for the poor (economically), for people of colour (culturally) and for all marginalized groups, including women (politically). As such, South African HE continues to experience pressure to address issues of social justice.

This inequitable state of affairs is not unique to South Africa's HE system, but is rather symptomatic of a broader, national condition of deep inequality deriving from a long history of colonialism and apartheid. Indeed, despite liberation in 1994, South Africa remains one of the most unequal societies in the world. It has a Gini coefficient of 0.63,⁴ where the average black-headed households earn less than a quarter of the average of white-headed households (StatsSA 2017). The unemployment rate for blacks is a staggering 30.5%, while it is only 8% for whites (StatsSA 2019). The predominance of English in all spheres of education massively privileges Western knowledge sources over local ones (Kaya & Seleti 2013) and the persistence of patriarchal social forces continues to elevate male voices above women's in numerous fields (Akala 2018).

While these structural inequalities will continue to shape the South African HE system in the near future, the Fallist protests reminded HE practitioners that there are areas of activity that universities, administrators and lecturers can engage with that may alleviate or transform certain types of situated inequalities for students and staff. It is important to explore these areas, to understand where

we, as individuals, or as members of the HE community, can take responsibility for highlighting and challenging inequality.

In this paper, we focus on a relatively narrow, but contextually important, area of HE activity that is currently highly inequitable: the traditional provision of expensive, fully copyrighted, print-based textbooks from Global North publishers to South African HE students.

The Digital Open Textbooks for Development (DOT4D) project,⁵ an initiative funded by Canada's International Development Research Centre, aims to better understand the affordances of digital open textbook publishing for supporting openly licensed, localised content development approaches, curriculum transformation and cost alleviation – both at UCT and at other South African HEIs.

Drawing on the work of Nancy Fraser (2005), which frames social justice – or “participatory parity” – in terms of economic distribution, cultural recognition and political representation, this paper presents insights gained in the DOT4D project. It addresses the following research question:

Do open textbooks have the potential to promote a more socially just approach to materials creation and provision in the South African higher education system, and what practices might address economic maldistribution (in terms of access and cost), cultural misrecognition (in terms of identity and marginalisation); and political misrepresentation (in terms of misframing and exclusion of voices) at the University of Cape Town?

Open textbooks as a tool for social justice

The UCT International Academic Programmes Office estimates the cost of textbooks and stationery at ZAR 7 000⁶ (approximately USD 475) per annum, a prohibitively large sum for most students. Indeed, the struggle to afford textbooks is experienced by students around the country.⁷ In 2015, textbook prices increased by the above-inflation percentage of 13.6% in one year⁸ and the costs continue to rise, particularly in the case of imported books (which constitute a large portion of the prescribed works in South African universities) – the cost of which is subject to a generally volatile, unfavourable exchange rate.

Furthermore, the Fallist protests served to highlight “students’ anger with how little higher education has transformed since the official demise of apartheid in 1994” (Quinn & Vorster 2017: 131). Protestors argued that the knowledge that is currently drawn on in university curricula comes predominantly from the Global North, and that there “is little acknowledgement of the important contribution to disciplinary knowledge of scholars from the Global South” (Ibid.). As such, students of colour do not feel represented or included in the largely white, Westernised version of the world presented to them in the classroom. These protests challenged HE stakeholders to rethink curricula, courses and pedagogical strategies in order to consider diversity and access in teaching and learning materials.

With these financial, epistemological and representational concerns in mind, the creation of open textbooks

and the positioning of individual academics and the university as publisher offers a potentially powerful response to the inequalities inherent in traditional textbook provision. The open textbook phenomenon is an extension of the international “open” movement, which aims to empower people through education by promoting the open licensing of software, educational resources, research outputs and data in order to make intellectual property freely available for use and adaptation. The open licensing of content forms part of a suite of open educational practices (OEP) applied in the creation and sharing of open educational resources (OER). The open textbook is one form of OER.

Open textbooks can be broadly defined as digital collections of OER and open access materials published under an open licence on platforms and in formats that provide affordances for the integration of multimedia, remixing of various content components, printing and redistribution.

Like traditional textbooks, open textbooks are written by academics and disciplinary experts, and are subject to a range of quality assurance methods. They are increasingly digital, although they can be designed to be or include versions that can be printed on demand. They are also conducive to multi-authorship strategies and participatory content development processes, integrating the learner in resource development and providing opportunities for pedagogical innovation.

In a recent paper, Lambert (2018) analyses the definitions and practice of open education employed since 2002 and highlights the fact that openness has focused on technology as a way to democratise access to education, yet it has not achieved its goal of increasing educational equality. She argues that a social justice approach “offers the opportunity for new empirical research to measure the social justice impact of initiatives in terms of the way that learners who, by circumstance, have less are able to be provided with more resources, recognition or representation” (Lambert 2018: 241).

The free-to-user aspect of open textbooks, combined with the affordances they provide in terms of alternative, more inclusive and representative authorship models, suggests that they hold promise in terms of acting as a mechanism to address economic maldistribution and structural inequity.

Theoretical and conceptual framework

The DOT4D project uses Nancy Fraser’s (2005) trivalent lens to examine inequality, specifically as relates to the following dimensions: economic (maldistribution of resources); cultural (misrecognition of culture and identities); and political (misrepresentation or exclusion of voices).

The three dimensions are analytically separate, which is useful in terms of forming a complete picture of the injustices in context. Nevertheless, they also form a complex, entangled web and all three dimensions need to be addressed for participatory parity to be achieved (de Kadt 2019; Leibowitz & Bozalek 2016). Fraser identifies two types of strategies to overcome injustice: *affirmative* strategies, which include activities aimed at ameliorating the scope or intensity of a particular injustice; and

transformative strategies, which seek to address the root cause of an injustice.

Hodgkinson-Williams & Trotter (2018) discuss Fraser's social justice framework in relation to OER and OEP. Their critical engagement frames current higher education injustices in terms of Fraser's three dimensions and suggests pathways for affirmative and transformative approaches to OER and their related practices. The roles of educators, institutions and government are clearly delineated, highlighting the complexity of intellectual property legislation and the power (or lack of power) granted to academics with regards to sharing their own teaching materials in different contexts.

Moje (2007) makes a distinction between "socially just pedagogy" and "pedagogy for social justice" in relation to Fraser's framework. Socially just pedagogy aligns with Fraser's economic dimension where everyone in the classroom has equal access; whereas pedagogy for social justice goes beyond providing access to giving learners the opportunity to co-create and produce knowledge (Moje 2007). These pedagogical considerations have been explored by other scholars (e.g. De Kadt 2019; Leibowitz & Bozalek 2016) in order to analyse the relationship between the scholarship of teaching and learning and social justice.

This approach enables a critical analysis of the UCT context and the extent to which open textbook production as well as open practices within the classroom are able to challenge the status quo and promote social justice through "parity of participation" (Fraser 2005: 73).

Economic injustice/maldistribution

The first dimension of Fraser's trivalent lens is economic distribution. Fraser explains that "people can be impeded from full participation by economic structures that deny them the resources they need in order to interact with others as peers" (2005: 73). The traditional provision of expensive textbooks, for many poorer students, impedes their full participation in education as they are often forced to choose between buying textbooks (while denying themselves some other critical resource), or foregoing purchasing textbooks altogether (missing out on a critical intellectual resource).

In addition, this is often exacerbated in developing countries like South Africa by the "digital divide" which imposes further challenges to accessing educational materials electronically, such as: access to the type of devices (mobile phones or laptops) required to access e-books and enjoy their optimal functionality, the prohibitively expensive cost of mobile data, and unreliable or poor internet connectivity. Some students may also lack the technological skills or digital literacy required to access and use e-books when entering the university, which might constrain them from accessing the content that they need to succeed in their studies.

Preliminary evidence from the international HE environment indicates that open textbooks and other forms of OER have the potential to significantly cut the cost of education for students without harming learning outcomes (Bliss et al. 2013; Ikahihifo et al. 2017; Ross, Hendricks & Mowat 2018). Research also suggests that

in some instances students preferred these resources to traditional textbooks (Fisher 2018), and that there can be statistically higher course completion rates when an instructor uses an open textbook compared with a commercial textbook (Ross, Hendricks & Mowat 2018). In this sense, open textbooks have the potential to ameliorate economic maldistribution of resources in HE without negative consequences for students.

Embedding open textbook creation in formal institutional practice, where authors are supported in terms of the time and resources required to produce open textbooks, has the potential to further the transformative impact of open textbooks in addressing economic injustice (for the academic creators, in this case). Authors could be supported through various institutional strategies, but possibly also through government funding.

Cultural injustice/misrecognition

The second dimension of Fraser's trivalent lens is cultural recognition. In the South African context, as with many countries in the Global South, cultural injustices are manifest through hegemonic practices where content from the Global North is prevalent in the textbooks used locally and resources are written in English. These texts are often selected by South African HEIs because they constitute a "global" canon of knowledge, irrespective of how well they serve students or represent local lived realities. These are the injustices that Fraser refers to when she states that "people can also be prevented from interacting on terms of [participatory] parity by institutionalized hierarchies of cultural value that deny them the requisite standing" (2005: 73).

Added to this, the traditional notion that quality resources can only come from authors published by commercial publishing houses still exists and may serve to undermine the authoring and publishing of texts by local stakeholders. The Western-oriented epistemic positions espoused in textbooks may also include ideas about pedagogy and traditional classroom structures. An affirmative response would consider alternative views in academics' production of teaching resources, actively including women and focusing on transforming curriculum to include local content and languages. Open textbooks may allow for new forms of collaboration, extending beyond the traditional academic-to-student transmission process to include academic-academic, student-academic, and student-student forms of knowledge creation. Open textbooks can provide more accessible formats and can be written in genres that embrace cultural differences.

A transformative response within the institution would involve incentivisation, enabling policy and reward structures, and the valuing of open textbook authoring as part of the institutional culture.

Political injustice/misrepresentation

The third dimension of Fraser's trivalent lens is political representation. Political injustice surfaces in misframing and exclusion of certain voices, resulting in "asymmetries of political power" (Fraser 2009: 103) between those who have, or do not have, rights of membership in a decision-making community.

In the case of traditionally published, commercial textbooks, publishing houses control the means and the cost at which materials are dispersed to HEIs and/or individual students. These textbooks are typically published under full copyright, limiting their downstream use and affordances for appropriation. They are likely to be selected by individual lecturers or faculty review boards who act as knowledge gatekeepers, making decisions around texts that are perceived as being recognised within the canon of particular disciplines.

These historical asymmetries of power result in the exclusion of some voices and the privileging of other voices. In this sense, gatekeeping academics and institutional structures may hold the power to reframe political injustice and potentially have the agency to include or exclude certain voices.

According to Fraser, an ameliorative response to political misframing would be the provision of representation for under-represented people. Within this context, content could be approached within a decolonised frame, ensuring the inclusion of marginalised voices and the representation of those previously suppressed.

In order to address the root causes of political injustice, content creation approaches in open textbooks could include all relevant stakeholders, including students. At national or provincial level, government authorities and educational bodies could be clear in their valuing of new or adapted texts that include multiple voices and promote this practice through policy reform.

Various stakeholders, including students, lecturers and publishers, could be included in a national discussion to build an understanding of the injustices of the current textbook situation in South African HE.

Methodology

The data presented in this study are derived from a mixed-methods research and implementation approach which gained insights from one round of in-depth interviews (of approximately 1.5 hours each) with five UCT open textbook authors; a Background, Technology Fluency and Personal Reflection (BTFPR) survey administered to the 13 UCT grantees in the DOT4D grants programme; and the DOT4D project field notes tracking 15 months of interactions with the UCT open textbook community.

The design of the interview schedule was informed by the project conceptual framework. These interviews comprised the first of two rounds of interviews in the greater DOT4D data collection process, and sought to surface the injustices that academics were grappling with in their classroom contexts and the different ways in which they were endeavouring to address them. Interview participants were selected based on their prior involvement with open textbook production, disciplinary spread, level of expertise, and their gender.

The design of the BTFPR survey was also guided by the project's conceptual framework. As such, it sought to surface the various barriers academics face in creating open textbooks as well as the barriers faced by students in accessing materials. The survey was comprised of a set of demographic questions, questions about academics' use of technology, and a number of personal reflection

questions. It was administered to the grantees in the DOT4D grants programme on the basis of the work that they had done or were currently doing within UCT on the production of open textbooks and the diverse disciplines and fields that they represent.

The field notes captured comments and reflections arising in the course of the DOT4D implementation and advocacy activities. They are comprised of notes from publishing conversations between the DOT4D Publishing and Implementation Manager and project grantees; transcriptions of the conversations which took place in two key DOT4D advocacy and community-building events at UCT in the course of 2019; and minutes of conversations with senior representatives of UCT Libraries. As Fillipi and Lauderdale (2018) point out, field notes are an essential component of rigorous qualitative research and are recommended as a means of documenting contextual information.

The interview and survey data collection processes engaged academics who were selected on the strength of written proposals for funding to support open textbook initiatives with a social justice focus. This has resulted in selection bias. The views of the participants should therefore not be considered representative of all UCT academics, but rather a purposive sampling of academics identified as part of an innovative cohort pioneering OEP and the production of open textbooks at UCT.

Analysis of the data presented was undertaken through the coding of transcripts from interviews using Nvivo qualitative analysis software using a coding framework informed by the project's social justice lens.

Table 1 provides a summary of the demographic profiles of the cohort of DOT4D open textbook authors and interviewees, whose insights inform the findings presented here.

The detail presented in the table demonstrates the diversity of the academics who participated in the DOT4D study in terms of their disciplinary spread and years of teaching experience. Interview participants were selected with an explicit intersectionality focus in order to include diverse race and gender profile; grantees were selected by an institutional committee based on other criteria, such as curriculum transformation and student inclusion in the authorship process.

Findings

Using Fraser's social justice framework, this section presents preliminary findings from the DOT4D project with regards to the ways in which open textbooks promote a more socially just approach to materials creation and provision in the South African HE system. The analysis is presented according to Fraser's three categories of social injustice (economic maldistribution, cultural misrecognition and political misrepresentation), while acknowledging that these categories are "inextricably interwoven" (Fraser 2005: 75).

Economic maldistribution

Findings from the DOT4D study indicate that there are a number of dimensions in terms of how the injustice of economic maldistribution manifests at UCT. Data show

Table 1: DOT4D research participant demographic profiles.

Designation	Gender	Race	Discipline	Years of teaching experience
Senior Lecturer*	Female	White	Mathematics	10
Head Tutor*	Male	Black	Mechanical Engineering	4
Senior Lecturer*	Female	White	Architecture	23
Associate Professor*	Female	Black	Construction Economics and Management	24
Senior Lecturer*	Male	White	Health Sciences	10
Manager	Male	White	Marketing	13
Lecturer	Male	White	Mathematics	6
Associate Professor	Female	White	Computer Science	12
Lecturer	Female	White	Chemistry	5
Lecturer	Male	White	Chemistry	5
Head of Projects	Male	White	Marketing	5
Senior Researcher	Male	White	Health Sciences	5
Senior Lecturer	Male	White	Statistics	26

* Denotes participation in interview process.

that academics are increasingly aware of the problem of expensive textbooks and that open practices are viewed as critical for alleviating this burden, but that the time entailed in resource production is a significant cost to the academic.

Finding 1: Academics at UCT are aware of the challenges related to the cost and utility of traditional textbooks and are experimenting with new approaches towards resource creation through open practice

Findings from the DOT4D project indicate that academics participating in the study were aware of the prohibitive cost of standard commercial textbooks for students. The issue of cost was cited by many as the “tipping point” in terms of the primary motivating factors that prompted them to explore open textbook creation. As one open textbook author stated: “we can get [textbooks] online and it’s a bit cheaper, but it’s still a financial burden, either for departments or for the students, so I think that was the first motivating factor”.

The second most frequently cited motivating factor cited was the limited utility of previously prescribed textbooks. One lecturer stated that the prescribed mechanical engineering textbook with which they have been working was inappropriate, as it utilised American drawing standards and imperial measurements. Added to this, the course used less than 10% of the book’s content, which meant that in a class of around 200 students, “less than a dozen” procured the textbook.

A commitment to open practice and the importance of spreading knowledge was also cited as a motivating factor in their open textbook production efforts. This speaks to their belief that the most basic affordance of openness, the spread of knowledge within and beyond the classroom, is a key factor in their decision-making around why to adopt OEP.

One of the DOT4D participants spoke particularly about the ambition to “transfer knowledge to people in industry”. This sentiment was echoed by a lecturer in Health Sciences who stated that in areas such as health care, access to knowledge could have a direct impact on someone’s life. He felt that knowledge “just needs to be out there and easily reachable and without an inherent charge to the end user.” In this sense, the open practices of a number of respondents stem from their desire to engage with the world and transfer knowledge beyond the academy.

Finding 2: Time is a significant cost to the academic in open textbook production

While open textbooks contribute to alleviating the financial crisis for students because they are free to access, there is still a cost involved in the production and ongoing delivery of open textbooks, particularly in terms of the time required on the part of the academic to author, format and publish these resources. The “cost” burden is therefore shifted from the student to lecturers, a situation which is compounded by the lack of formal institutional recognition for activity in this area.

All respondents highlighted the time required to produce and publish open textbooks as a significant cost and the most substantial barrier to open textbook creation. As one author stated: “Honestly, the biggest problem is time. It takes time to produce a really good book and get it written and checked ... there needs to be support for people to have time to just write.”

Cultural misrecognition

In terms of the potential of open textbooks to address marginalisation and cultural misrecognition of student identity in the South African HE system, data from the UCT context suggest that new, open resource creation models provide avenues to explore more inclusive peda-

gogies. As part of this approach, academics are exploring strategies to make content more relevant and accessible, despite the range of challenges that exist in terms of current institutional culture.

Finding 3: Open textbook authorship models are providing avenues to explore innovative, student-centred pedagogical approaches

The commitment to open practice on the part of open textbook authors in the DOT4D study extends beyond open textbook production to foundational approaches towards pedagogy. A number of respondents indicated that having the assurance that students are able to access the required text enables them to ask more questions that integrate deeply with course content and to ask different kinds of assessment questions which acquire closer reading and engagement with the text.

One participant who embedded her open textbook development process in her course delivery approach indicated that working with students to create materials made her think more critically about her teaching. She stated that “we are trying to change the way of teaching from being the lecturer delivering and students repeating, to lecturers offering a framework ... that students can author within”. This sentiment resonates with the belief held by many respondents that their primary value contribution is teaching students how to learn to think.

In one instance, an open textbook author teaching first-year mathematics referred to her open textbook as an inclusive “teaching space”, which could be adapted to her purpose of training mathematical minds in line with international standards while paying attention to local context. In this sense, the open textbook was conducive to her efforts around addressing decolonisation of the curriculum, which she described as being “less about what we teach, but about how we teach”.

Finding 4: Open textbook authors are attempting to make content more accessible in terms of relevance, format and genre in order to promote greater inclusivity

Efforts on the part of open textbook authors in the DOT4D study to engage students in the creation and review of course material, combined with evidence of a willingness to experiment with diverse content delivery mechanisms, suggest that academics at UCT are thinking about how to make content more accessible in terms of relevance, format and genre.

A number of respondents are adopting a resource design approach which consciously engages with local context and attempts to make examples as relatable to South African students as possible. Many participants viewed this as a key strategy in pursuing a decolonised, inclusive curriculum which is reflective of a Global South reality.

The efforts of authors in the DOT4D cohort to boost local relevance are frequently complemented by attempts to make resources more interactive – in terms of how the content is designed as well as how it is delivered. Numerous lecturers indicated that their resource design approach was a response to a call from students for more

interactivity and practice examples, and some authors introduced tailored features, such as “tips and tricks”, in order to guide students through the content in a more supportive fashion.

The digital nature of the open textbooks under development by the DOT4D author cohort was also seen to be valuable in terms of boosting accessibility, as many digital content creation platforms enable linking to multimedia and additional practice and test materials. One lecturer expressed that the affordances for integrating practice activities in the authoring platform she was using created an excitement amongst students about the idea of interacting with a “living document”, and a number of authors expressed frustration at the limitations of working with content which was constrained by delivery in print.

In addition, a number of respondents are exploring strategies for providing supplementary materials in languages other than English in order to aid the understanding of technical concepts, particularly in subjects that students are introduced to for the first time at university or which less-resourced schooling contexts do not offer. In many of these instances, the use of colloquial voice and informal content delivery channels (such as social media platforms) are being explored in terms of guiding students in a peer-to-peer fashion. The use of a more informal, non-academic register does, however, present a disruption to the notion of authority, surfacing tensions in terms of quality perception, which traditionally relies on a more formal, academic tone.

Finding 5: Open textbook activity appears to be on the rise at UCT despite a range of institutional barriers to open textbook development activity

UCT lecturers in the DOT4D study cited an array of institutional factors that serve as barriers to sustained, scalable open textbook development activity. In addition to the issue of time, one of the biggest barriers to open textbook creation is the current “Ad Hominem”⁹ academic promotion system.

A number of participants referenced the fact that the academic reward system at UCT was skewed towards the publication of research outputs over textbooks and other learning materials, and that their resource creation efforts were seen as something over and above what they were supposed to be doing. One open education practitioner who had a long history of creating OER at UCT felt that formal incentivisation and recognition in the academic promotion system, based on the principle that this work “is the right thing to do”, would be the most effective way to promote activity in this area.

Two participants stated that the lack of institutional reward for open textbook development was compounded by a lack of support for the textbook development process, a lack of established quality assurance mechanisms and a lack of funds to buy out academics from their teaching commitments.

With regards to the issue of quality assurance, one interviewee highlighted challenges related to the specialist expertise required to review a textbook, particularly in highly technical subject areas where the resource

embodies an author's particular vision regarding an innovative or unconventional pedagogical approach.

Despite these barriers, evidence suggests that there is continued insistence on the part of UCT academics that open textbooks can and should be developed. One lecturer stated that even though her efforts would not count in her faculty promotion system, they would be recognised by her students, which she viewed as her primary purpose.

Political misrepresentation

In the context of political representation, the DOT4D study has surfaced numerous power dynamics relating to traditional processes for selecting prescribed texts and recommended readings. Data from the study reveal, however, that open textbook development processes which include student contributions have the potential to shift power dynamics and give voice to those previously excluded from or marginalised in decision-making around whose knowledge is valued and presented in the classroom.

Finding 6: Academics at UCT acknowledge that there is a legacy of gatekeeping in the selection of prescribed textbooks which serves to perpetuate political misframing and exclusion

The issue of working with a canon of commercially published textbooks and recommended readings by internationally recognised experts in the field, as opposed to locally conceived and produced open textbooks, surfaced various gatekeeping mechanisms currently at work in preserving established hegemonies.

Participants indicated that decision-making around textbook and resource selection at UCT varied by faculty, but was largely left to the lecturer(s) of a particular course. That said, a number of respondents stated that most of the textbooks in use were being used as a result of legacy decisions made by previous academics. The decision around which textbooks to use has therefore been "handed down" over time.

This "received" approach around resource selection is partly a matter of convenience, but also serves as an embedded, sometimes subconscious means through which to perpetuate the status quo regarding the empirical perspective presented in the classroom. This was viewed by participants as being problematic in terms of the need for greater representation of current, relevant, localised student perspectives.

One academic referred to the approach in which "people just like to use the thing they learned from" as "antiquated". She explained that in her department they have been trying to move away from working with a single prescribed textbook and that lecturers were exercising agency in identifying texts "which explain the material we have to teach, the best". Another lecturer implied, however, that a culture of complacency in his department meant that there was not a great deal of attention paid to challenging the existing approach to selecting teaching materials.

This academic indicated that in his field of the Health Sciences, problematic aspects of the gatekeeping process in terms of whose knowledge was deemed legitimate in the classroom extended beyond the process of selecting

teaching resources to making key decisions regarding curriculum. He stated that decisions about curricula were typically made by members of the academic community who were "in their ivory tower", and were therefore "higher up and less connected" with the on-the-ground reality which graduates face, stating that they "never go ... where the majority of the health care actually takes place ... so it is impossible ... for them to fully understand what a healthcare worker faces there." In order to address this injustice, he argued for more of a bottom-up approach towards resource selection and curriculum articulation.

Finding 7: Open textbook authors at UCT are including students in content development processes in order to shift power dynamics and build confidence in terms of students' ability to contribute

The decolonial agenda that is being pursued at South African HEIs has not only called for the inclusion of student voices, but also their active participation in the shaping of the curricula through various forms of collaboration and authoring.

One DOT4D research participant declared that "our voices are not telling our stories" and shared how academics from Africa were not leading the conversations about Africa from Africa. In addition to this, she highlighted the absence of the student voice and perspective in these conversations. One senior lecturer also stated that students should be given the power to participate in decision-making processes, particularly as relates to the value or utility of the education they receive. In seeing students in this way, they are afforded the power not only to participate, but also to make decisions that will be valued.

A number of DOT4D research participants have endeavoured to include student perspectives in their open textbook development processes through various forms of collaboration, such as by working with students to develop assessments and incorporating student feedback into their open textbook development processes.

This effort to include student voice has been an important part of addressing curriculum transformation at UCT, both institutionally and amongst the academics in the DOT4D cohort. What they highlighted through their work was the feeling that students often have something to offer in the materials development process, but that they may not have the confidence to participate. Conscious effort is therefore required to build students' confidence so they believe they have something to say. Attention also needs to be paid to classroom power dynamics so that students believe they have the right to make a contribution.

One of the key factors relating to student involvement raised by respondents was the question of how best to attribute student contribution and in a way that ensures students are not exploited in this process, as they engage in activities that have traditionally constituted the work of the lecturer.

Discussion

When embarking on this research process, it seemed that the analytical distinction between the various forms of social injustice related to participation in South African

HEIs could be captured in a linear progression, ranging from identification of a particular injustice to the possible ameliorative and/or transformational measures that could be employed to address the situation. It is, however, apparent from the DOT4D findings that the various dimensions of social injustices and strategies for redress form an intricate web which needs to be engaged with in its full complexity in order to bring about desired change in South African HE. In this sense, the findings presented here bear out Fraser's view that cultural, economic and political injustices are "inextricably interwoven" (Fraser 2005: 75).

The data presented in this paper reveal a range of injustices experienced by UCT students and staff. There is a fundamental injustice of students being impeded from full participation in HE by economic barriers that deny them access to the resources they require. This is also an injustice in terms of the burden placed upon the lecturer, who is expected to carry the full load in terms of alleviating the cost burden faced by students, while receiving little formal institutional reward or support.

The absence of students' voices and participation in shaping learning resources and curricula also presents an injustice in terms of the suppression of students' ability to exercise their agency in shaping what and how they are being taught – and therefore of determining whose knowledge is valued and presented in the classroom. Underlying this situation is a deeper injustice related to the inappropriateness and inadequacy of traditional resources and content delivery approaches, in that they do not correspond with the changing nature of the classroom, the cultural contexts of the students, and the need for varied forms of access to knowledge and content.

The introduction of digital open textbooks into the South African HE system provides a mechanism through which to address the injustices related to parity of participation. They provide affordances to address inequality of access (economic maldistribution) to traditional, expensive textbooks. They also provide an opportunity to address epistemological iniquities (cultural misrecognition), in that they can enable the incorporation of local, relevant and multilingual components, increasing the utility of the text, resulting in a resource that is valued by students.

Open textbooks help to overcome various types of silencing (political misrepresentation) by including student voices. They provide academics with an opportunity through which they can design teaching activities to include student content in textbooks, facilitate opportunities for students to guide the content in textbooks, and, in a truly transformational sense, author the textbooks themselves. Through open textbooks, lecturers have the ability to change the way they teach, include student voices and create innovative teaching activities.

These shifts in pedagogical strategy address fundamental aspects of course design, or, in some cases, course redesign through the introduction of an open textbook. The data presented here demonstrate that a number of participants have used open textbooks as a way to make

content accessible and relevant; and that the production process has provided avenues for student input and collaboration.

In this sense, open textbook creators are taking steps to alleviate issues of cost and representation through the use of innovative open practices to develop textbooks that are fit for purpose and can be accessed free of charge online, both within and beyond the institution. The adoption of open practices by these academics to boost access to knowledge is therefore part of an ameliorative response which helps address social justice challenges.

Most of the strategies and mechanisms on the part of the lecturer for addressing the social injustices described in this paper form part of what Fraser refers to as an ameliorative response, in that they help to temporarily alleviate the negative outcomes of a situation. There were no instances of truly transformative responses that would challenge existing power relations and alter the fundamental structures which perpetuate these injustices.

A transformative approach would be for the institution or the government to introduce formal, endorsed systems and processes which provide greater rights to students in terms of the selection of learning materials and input on curriculum transformation processes. In order for this to be meaningful, it would need to be accompanied by a significant shift in terms of how open textbook activity on the part of academics is supported and rewarded by the institution. There would also need to be significant investment in the resources required to adequately support open textbook production and the quality assurance processes required to make this activity academically productive and sustainable.

Conclusion

This paper demonstrates that open textbooks and their associated open practices provide a powerful means to address economic, cultural and political injustices. As such, they have the potential to play an important role in enabling pedagogy for social justice and the transformation of South African HE.

The open textbook moves beyond the idea of a textbook as simply being the content provided to students to grow their knowledge in a field. It has the potential to change institutional "social arrangements" (Fraser 2005: 73), empowering academics to build curricula in a more relevant fashion, giving marginalised voices expression and students power over how knowledge is created in order to transform universities in line with the Global South's call for social justice.

While data from this study reflect the promise of open textbook initiatives in terms of advancing greater social justice, additional work is required in terms of scaling activity in this area beyond being a niche endeavour of an innovative cohort of academics within the institution. In order for this to take place, transformation of current recognition and reward systems is required on the part of the institution. The barriers presented by restrictive institutional intellectual property policies would also need to be addressed.

The focus of this study has been on one South African university, but it is envisioned that the lessons learned can be extrapolated to other institutional contexts, particularly in instances where there is a complex nexus of issues relating to resource constraint and contestation around whose knowledge is presented and valued in the classroom.

Notes

- ¹ <https://theconversation.com/africa/topics/rhodes-mustfall-23991>.
- ² <https://theconversation.com/africa/topics/fees-must-fall-21801>.
- ³ Fallist" (or "Fallism") is the term used to collectively refer to the #RhodesMustFall and #FeesMustFall protests. Starting in 2015, students at the University of Cape Town waged a campaign to have a prominent statue of Cecil John Rhodes removed from the campus while simultaneously demanding that the university "decolonise" its curriculum and knowledge orientation (#RhodesMustFall). This presaged a broader national wave of student protests, in which students and staff were mobilised in the fight for universal free higher education (#FeesMustFall).
- ⁴ <https://www.worldbank.org/en/country/southafrica/overview>.
- ⁵ <http://www.dot4d.uct.ac.za/>.
- ⁶ <http://www.students.uct.ac.za/students/fees-funding/us-federal-aid/general-info/cost-of-attendance>.
- ⁷ <https://mg.co.za/article/2014-10-03-students-hurt-by-pricey-textbooks>.
- ⁸ <https://mg.co.za/article/2014-10-03-students-hurt-by-pricey-textbooks>.
- ⁹ <http://www.hr.uct.ac.za/hr/performance/promotion/academic>.

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Competing Interests

The authors have no competing interests to declare.

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