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RESEARCH ARTICLE

Education as justice: articulating the epistemic core of education to enable just futures

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While education is expected to play a significant role in responding to global social challenges, sustainable development discourses often fail to attend to issues of pedagogy, purpose and process. In this paper, we argue that one way to focus arguments on educational practice is through considerations of the relationship between education *as* justice and education *for* justice. We do this through discussing one form of justice in education – epistemic justice – and developing our conceptualisation of an epistemic core. Drawing on Elmore's instructional core, this includes openness to students' experiences and the place where they live, rich pedagogies and a broad range of epistemic resources. We argue that this is one way that secondary education's contribution to sustainable and just futures could be made more concretely possible.

Keywords epistemic justice • education • pedagogy • global social challenges

Key messages

- Education carries great responsibility for developing knowledge, attitudes and changing behaviours for young people in relation to sustainable development.
- This paper conceptualises education as justice to enable education for justice.
- We develop the concept of an 'epistemic core' to support young people to consume, recognise and produce the knowledges necessary to contribute to sustainable development.

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Introduction

Global sustainable development agendas place a great burden of responsibility on the role of education for achieving desired goals, while at the same time being notably vague in how they conceive of educational practices and processes. In this paper, we seek to address this by arguing for a reimagining of education with epistemic justice at its core. We show that this is necessary to support young people to understand and be able to respond to the complexity and scale of the global social and environmental challenges that they face today and in their futures. Through this, we build on the foundations of recent scholars who have argued for the necessity of doing education differently, whether it be on the grounds of transdisciplinarity (Singh, 2021), transgressive and transformative learning (Lotz-Sisitka et al, 2015) or complexity (Tikly, 2019).

This is a largely conceptual paper that is the result of more than three years of close collaboration between the two authors in the JustEd Project, in a comparative, mixed-methods research study of the role of education for justice. JustEd analysed secondary education policy, curriculum and pedagogy, as well as learners' experiences and their expected actions in relation to sustainable development in Nepal, Peru and Uganda. This study has developed understandings of education and justice in the specific areas of peaceful coexistence, positive climate action and reduced inequalities, which in turn have been informed by key scholars of environmental, epistemic, social and transitional justice (Milligan et al, 2021). The study also provides empirical evidence that illuminates different dimensions of the complex relationship between education and its intended justice outcomes. In this paper, we bring key insights from the study into conversation with the broader literature in the field, to develop a more general and theoretical understanding of education *as* justice that can enable education *for* justice.

We purposefully focus on the epistemic dimension of injustice because of its particular relevance to educational endeavours (Kotzee, 2017), and also because of our concerns for the narrow conceptualisations of justice in education and sustainable development (Unterhalter, 2019; Menton et al, 2020). These conceptualisations include a focus on distributive aspects of justice often to the exclusion of elements of recognition, and tend to promote simplistic understandings of the role that education can play in promoting justice within and beyond education.

The paper begins with a discussion of how the role and expectations of education for justice have been conceived and the ways they have been articulated in global policy debates. We draw on several critiques that point to poorly defined processes and purposes and the frequently unreasonable expectations that exceed what formal education can do. The second section seeks to redefine the role of education as and for justice by focusing it on epistemic justice, in particular the development of students' capacity to participate as equals in the production, recognition and consumption of knowledges. We then discuss how strengthening what we define as the *epistemic core* of education can prepare students to meaningfully contribute to the just transformations that are required for sustainable futures.

Expectations of education for justice

While the idea that education can and should contribute to promote justice, especially social justice, is not new (Ayers et al, 2009; Boyles et al, 2009), the explicit

appearance of a justice focus in global education policy debates is fairly recent and the concept of justice has remained 'under-theorized' (Gewirtz, 1998: 469). Menton et al (2020) point to the scant appearance of justice-related terminology in the original formulation of the Sustainable Development Goals (SDGs) (United Nations, 2015). Today, however, more than halfway through to the SDGs' 2030 deadline, the focus on justice has permeated into many global education policy debates as a component of the necessary 'transformations' to ensure a socially and environmentally sustainable future (ICFE, 2022).

Before discussing what this renewed focus on justice might imply for education, it is worth considering how the relation between the two has been understood in academic and policy debates. Such understandings have tended to align with theories of justice that conceive the latter in distributive terms – where justice is understood as fairness in distribution (Rawls, 1958). From this perspective, education has been seen to be both a good that needs to be distributed fairly, and one that enables access to other essential goods (for example, health, work, well-being). Debates around this conceptualisation of justice and education have highlighted that promoting equality of educational opportunities may not be enough to ensure fairness, and that such efforts need to be complemented with a focus on equality of outcomes, so as to balance out the unequal starting points from which children from different backgrounds encounter existing opportunities (Phillips, 2004).

More contemporary theories of social justice follow critiques of the distributional model made by the likes of Young (1990) and Fraser (2020), who argue that the distributive dimension of justice is not enough, and that problems of recognition must be considered if the relational aspects of injustice are to be addressed. Justice as fairness needs to be complemented with what Young defines as 'freedom from oppressive relations' (in Gewirtz, 1998: 472). In education, the recognition dimension of justice translates into a focus on the need to promote schools and learning environments that are inclusive of diverse cultures, ethnicities, abilities and gender identities. Both fair distribution and recognition, alongside representation, are required to enable the 'parity of participation' that, according to Fraser (2009: 16), is the ultimate goal of justice, and entails that all human beings can relate as peers with 'equal moral worth'.

With these ideas in mind, we can now consider how education policies have addressed justice concerns. McCowan's (2010) work on the need to reframe the universal right to education provides a useful entry point to this discussion. The author critiques the vagueness of how this right is conceptualised, so that it is unclear whether it is meant to guarantee 'access to educational institutions, to a particular form of educational experience, or to some educational effect' (McCowan, 2010: 2). He argues that it should be to all of these, of course, but maybe more importantly, he shows how questions of educational process and experience are often sidelined in favour of an exclusive focus on ensuring access and results. While there are various reasons for this, we could argue that one of them may be the dominant focus on distributional justice concerns, to the detriment of the more relational questions that a focus on recognition and parity of participation would raise.

Unterhalter's (2019) analysis of the process through which the indicators for education-focused SDG 4 were developed, provides another layer of explanation as to why a justice focus – even of the distributional kind – might be absent from global policy frameworks. She shows how while the initial definition of SDG 4

appeared to give equal weight to questions of quality and equity in its understanding of the universal right to education, the apparent consensus around this masked the 'struggles' over the meanings of these terms. Such struggles, however, re-emerged during the development of indicators for the goal. Here, 'the institutional histories [and differences in power] of different organisations and governments' led to the dominance of a narrower focus on measurable quality and learning, at the expense of the need to respond to learners' diversity and promote the 'structural transformations' required 'to support equity' (Unterhalter, 2019: 42).

The sidelining of equity concerns may have occurred, in part, because of the greater difficulty in defining measurable indicators for structural and more qualitative changes in educational processes and relations, in comparison to the somewhat more straightforward task of defining measurable learning outcomes (Unterhalter, 2019). But the lack of centrality of equity concerns also reflects existing differences in the power of various epistemic communities and the dominance of a technocratic knowledge regime that has promoted a 'new language of learning' (Biesta, 2016: 17) in which questions of purpose and process are often overlooked. We would argue that, in a similar way to what McCowan (2010) described in the case of the right of education, the absence of questions of purpose and pedagogical process from this agenda of learning outcomes does not enable the inclusion of broader social outcomes that are key to a justice agenda in education.

Given this lack of focus on purpose and process, the policies that emerge from these frameworks tend to assume somewhat linear trajectories between curricula and practice, as if simply making curricula more inclusive were enough to address problems of oppressive relations and exclusion based on status, identity or ability. Adding to this there is an entrenched tendency, when addressing education in the context of the SDGs, to think in 'silos' (Bengtsson et al, 2018; Unterhalter, 2021), as if each of the problems that the goals address was independent of the others – something that goes against the 'increasing recognition' about the interconnectedness of 'environmental, economic and social issues' (Bengtsson et al, 2018: 8). These narrow definitions and the siloisation of policy seem to be in stark contrast with the brunt of responsibility that is put on education to help resolve many of the world's major problems.

The acknowledgement that the combined challenges of sustainable development, climate change and poverty are leading to a breaking point that may threaten the continuity of life on the planet has led to a reckoning with the idea that real transformations in our economic, political and social modes of organisation are necessary if the changes we need to make are to be possible (TAP, 2019; ICFE, 2022). This is explicit in UNESCO's work on the futures of education, which addresses questions of educational purpose linked to the broader societal goal of shaping 'peaceful, just and sustainable futures'. The report (ICFE, 2022: 3-4) proposes the need for a 'new social contract for education' that fully addresses an understanding of education as a human right, as a public endeavour and as a common good, that emphasises the relational nature of education, calling for pedagogies to be 'organized around the principles of cooperation, collaboration and solidarity'. More recently, UNESCO (2023) have also recommended an update to the 1974 UN recommendation for Education for Peace and Human Rights, International Understanding, Cooperation, Fundamental Freedoms, Global Citizenship and Sustainable Development on the grounds of transformative education.

While this may seem promising, it is important to note that UNESCO is not the only, nor necessarily the most powerful or influential international organisation in this context. Elfert and Ydesen (2023: 25) describe it as 'the idealist' agency in comparison to the OECD (seen as the 'master of persuasion'), and the World Bank (described as 'the master of coercion'). The latter agencies have not shown signs of a shift similar to the one proposed by UNESCO and seem intent on pursuing an agenda of more narrowly defined learning outcomes. Their line of thinking 'relies on the logic of globalization in terms of the global marketplace and the free flow of capital, and the pursuit of competition as a driver of the world order' (Elfert and Ydesen, 2023: 41). While initially the pandemic appeared to open global educational discussions to a line more akin to UNESCO's transformative futures agenda, the World Bank–led discourse on post–pandemic 'learning loss' and the emerging 'learning crisis' (World Bank, 2019) – with its focus on getting children back to school and promoting foundational learning – suggests otherwise.

In what follows we want to contribute to a more clear and specific understanding of what a justice agenda in education might entail, making the connections between policies, curricula and practice more specific through an emphasis on the pedagogical elements of a just education. We suggest that a more practicable agenda for a just education can be promoted through a refocusing of debates and questions about epistemic justice.

Considering epistemic justice in education

So far, we have demonstrated how education's narrow conceptualisation of the global education agenda and its separation from broader development goals limits the role that education can play in responding to the global social challenges facing young people now and in the future. To envision the type of educational system that is needed to take on this task, we suggest placing justice at its centre. In other writing and with colleagues on the JustEd Project, we have conceptualised a multiple justices framework for analysing education (Milligan et al, 2021), incorporating aspects of transitional, epistemic and environmental justice into an underlying framing of social justice (Wilder et al, forthcoming). Here, we are particularly concerned with epistemic justice which we see as having a transversal role within education and across the other justices, highlighting its fundamental role in enabling other justices to be addressed through education.

While the question of knowledge has been central to many global social justice debates (Mignolo, 2009; Quijano, 2013; Spivak, 2023), it is only relatively recently that the distinct theory of epistemic (in)justice has been applied to education spaces. Education scholars have predominantly drawn on Fricker's (2007) *Epistemic Injustice: Power and the Ethics of Knowing* to consider how schools become sites of knowledge inequality, where particular forms of knowledge are deemed more trustworthy or valid (Zembylas, 2018; Walker, 2018; Balarin et al, 2021; Lara-Steidel and Thompson, 2023). As Kotzee (2017: 327) explains, education scholars use epistemic injustice to 'ask how decisions about the curriculum enable or block students' understanding of particular social experiences and encourage or inhibit the ability of students from particular cultures to express their particular understanding of the world'.

Most of these discussions, including Fricker's own work, focus on epistemic *injustice*. This helps describe different instances and types of epistemic injustice

and the negative impact it may have on individuals. In analysing the data from the JustEd Project there were multiple examples from all countries of persistent and overlapping epistemic injustices across subjects and topics. These ranged from the predominance of languages that curtail children's understanding of school knowledge to the disconnection between curriculum and materials and young people's lived experience, to the prevalence of pedagogies that limit students critical thinking and understanding of complexity (Balarin and Rodriguez, 2024; Milligan et al, 2024; Paudel et al, 2024 – all in this collection).

Through our analysis and discussions we considered it important to go beyond accounts of injustice and to produce a positive definition of epistemic justice that can help guide what educational spaces, practices and outcomes can aspire to be (see Geuskens, 2018). We have drawn on Hall et al's (2020: 35) writing about epistemic pluralism and knowledge hierarchies where they propose that epistemic justice lies in 'equality in the production, recognition and consumption of knowledge'. When using this definition in our work, we propose two small, but important adaptations – the explicit use of knowledges in the plural and a change in the order of words that we feel better reflects the processes through which we become producers of knowledges. This leads us to the define epistemic justice as 'equality in the consumption, recognition and production of knowledges'.

Our use of knowledges in the plural reflects our belief in the need for pluriversal and multilingual practices to be a basis for epistemically just educational systems. However, we note here our caution against epistemic relativism. Rather, with Robertson (2013), we believe that there is an essential role for the epistemic value of diversity that should not undermine the possibility for evaluating justified knowledge claims. As Robertson (2013: 166) argues, drawing on Haraway (1988) and McLaren (2015), it is necessary for knowledge claims to be analysed through the "socially situated" nature of knowledge production, including the variety of ways inquiry is affected by the socially located interests and perspectives of the knowledge producers [asking] not only whether a claim is true but also whose interests it serves and who benefits from the acceptance of the claim'. An education system built upon epistemic diversity, thus, is one where multiple knowledges are not only included but interrogated and extended.

Central to our understanding of epistemic justice is that it is not a standalone form of justice but one that is interconnected with – and often enables – social, environmental and transitional forms of justice. To bring the different forms of justice together, we have drawn on Fraser's (2009) theorising of social justice as 'parity of participation' with economic, cultural and political spheres and across the three Rs of redistribution, recognition and representation. If we return to our definition of epistemic justice, we can see how parity of participation and the three Rs bear close similarities with the idea of equality in the consumption, recognition and production of knowledges. This is both in terms of the ways that education is a space that is built upon such a definition of equality (what we consider to be education *as* justice) and in the outcomes of education and how young people can access such equality throughout their lives (the role of education *for* justice).

First, we identify a distributional element to epistemic justice in education in terms of how epistemic resources are (un)equally distributed. At a very functional level, this may start with what physical materials are available through which young people can consume curricular knowledge, such as textbooks and workbooks, including making

these accessible in multilingual and multimodal forms. However, our understanding of epistemic resources goes beyond curricular materials to include a consideration of access to consumption and production of the 'collective epistemic resources on which we depend to make sense of and engage the world' (Shotwell, 2017: 86). These resources include knowledges but also an ability to understand, evaluate and critique the knowledges we are presented with. The fair distribution of collective epistemic resources would, therefore, involve supporting young people to make sense of – and contribute new knowledges that can counter – the unjust world around them.

Second, there is something specifically epistemic in the ways that misrecognition can take place through the positioning of knowledges as alternative or inferior. Masaka (2019) writing about decolonising curricula in postcolonial African countries, helpfully explains how recognition in epistemic terms needs to go beyond 'simplified arguments on knowledge inclusivity and epistemological pluralism' (Keet, 2014: 27) to involve the genuine acknowledgement and acceptance of the contribution of Indigenous people of Africa to knowledge production. He further highlights the importance of considering how young people will use these knowledges in their future lives. This links to the third element of Fraser's model – representation – which we see in terms of what (and whose) knowledges are part of decision-making processes both within and beyond education. How does education support all young people to consume and produce knowledges that enable representation in decision making or, as a recent paper in this journal has stated, 'who has a say in climate change decision making, and who does not?' (Boss et al, 2023). Based on these redistribution, recognition and representation elements, we argue that being able to contribute and access knowledge and understand how knowledge works is a necessary condition for parity of participation.

One of the key debates among scholars of epistemic justice focuses on the site where epistemic injustice takes place. Fricker's writing provides powerful concepts and illustrative examples for the ways that epistemic injustice occurs primarily through individual interactions. However, as Walker (2018: 13) argues, this focus fails to account for the 'material conditions fueling epistemic injustice', something that has prompted some authors to use Fricker's understandings of epistemic injustice in tandem with analyses of broader, structural inequalities (Nikolaidis, 2023). Here, Anderson's extension of the site of epistemic injustice to include the structural contexts of social institutions, including schools, has been particularly influential in our thinking (Anderson, 2012).

In our work on the JustEd Project we found multiple examples of epistemic injustice at both the level of individual interactions and broader systemic structures and patterns of justice and injustice, operating at local, national and global levels. For example, the epistemic injustice of an unfamiliar and dominant language of learning such as English is something that can be analysed at the three levels. Unfamiliar languages affect how often students talk to teachers, the quality of their interactions and inequalities in how teachers respond to students (Milligan, 2022). Language scholars have consistently shown how classrooms, therefore, become sites where learners are denied 'epistemic access' to the curriculum (see, for example, Mkhize, 2016). However, as Kerfoot and Bello-Nonjengele (2023: 462) argue in the context of South African classrooms, a focus on epistemic access to the curriculum leaves 'value hierarchies and relations of knowing unchanged'. This requires analysis of the institutional, national and global conditions that perpetuate language hierarchies, placing English as a 'global language'

and part of an imagined and aspirational future for students sitting in those Englishmedium classrooms (McKinney, 2016; Adamson, 2022).

This consideration of language in education highlights the ways that thinking about epistemic justice in education also necessitates a concern with power and coloniality. While postcolonial theorists may not explicitly talk about epistemic (in) justice, ideas around the 'coloniality of knowledge' (Quijano, 2013) and the role of 'epistemic violence' (Spivak, 2023) point in a similar direction and highlight how the decolonial project needs to go beyond the decolonisation of formal institutions to focus on knowledge itself. Quijano (2013) specifically spoke of the 'control of subjectivity and knowledge' as a key aspect of the 'coloniality matrix'. The coloniality of knowledge could be understood as a major structural form of epistemic injustice that is embedded in the global colonial regime and which in many ways persists to this day in the dominance of certain forms of thinking and being - including the dominance of certain languages. Spivak's notion of 'epistemic violence' clearly argues this. The coloniality of knowledge is particularly pervasive as an epistemic injustice because it provides a grammar (a dominant idea of knowledge) that does not enable people to connect their experiences – of marginality, oppression, exclusion – to the broader structural and historical processes that cause them. Education can reproduce, or potentially challenge, the coloniality of power and knowledge (Freire, 1973; Giroux, 2016), and is therefore a key site in which our more positive definition of epistemic justice could be realised.

Articulating the epistemic core

We propose that a useful way to articulate the important role of education as justice is through focusing around the idea of the 'epistemic core of education', that involves pedagogies, resources and students' contributions. This idea borrows from Elmore's (1996; 2008) notion of an 'instructional core' composed of teachers, students and content, in which the relation between those three elements, and not any one of them individually, determines the nature and quality of pedagogical practice. Pedagogy here is understood not simply as teaching, but also as the relationships that teaching involves and the broader social and cultural values that pedagogies are embedded in - it is 'the act of teaching together with its attendant discourse of educational theories, values, evidence and justifications' (Alexander, 2009: 928; see also Shah and Campus, 2021). Elmore highlights how teachers' understanding of what knowledge is crucially shapes their role in supporting students to understand knowledge. Elmore's work has been discussed by other authors in relation to how to recentre the focus of education reforms on pedagogical practice (Rincón-Gallardo and Fleisch, 2016; Balarin and Rodríguez, 2019), including recently in Tikly's (2019) discussion of transforming education for sustainable development. We believe that this idea of the instructional core can be furthered by exploring the explicitly epistemic dimensions of the relationship between teachers, students and content.

We argue that strengthening the epistemic core (see Table 1) is fundamental if education is to act as a space where justice is done. This, we contend, can be achieved through a focus on at least three key aspects of educational practice that need to be strengthened in order to enable students to participate as equals in the consumption, recognition and production of knowledge: grounding learning in experience and place; providing learners with a broad range of epistemic resources; and promoting rich pedagogies.

Table 1: The epistemic core

The epistemic core as:	
Openness to students' experiences and the places where they live	so as to broaden knowledge and promote an understanding of what it means to make a contribution.
Rich pedagogies	that connect to experience, develop critical thinking and lead to understanding of complexity and problem solving.
A broad range of epistemic resources	including materials and content that is sound (well-justified knowledge) and diverse (recognising and representing different perspectives and what they may bring to the knowledge making process).

In the rest of this section, we expand our discussion around the three dimensions of the epistemic core, using key evidence from the JustEd Project. This evidence, and the associated arguments, is drawn from papers written by colleagues within the project – in some cases led or in collaboration with us – and from Nepal, Peru and Uganda. This includes papers from within this special collection (Paudel et al, 2024; Balarin and Rodríguez, 2024; Milligan et al, 2024; Shields and Muratkyzy, 2024) and published elsewhere (Nuwategeka et al; Wilder et al, forthcoming; Soysal et al, forthcoming). While we do not have the space to bring in extended examples, nor the arguments that have been further developed in these papers by our colleagues, the conclusions that we draw are grounded in our understandings of the key findings and our sustained dialogue over the years of the JustEd Project.

Connections to experience and place play a central role in enabling students to access, make sense and eventually produce knowledge that is meaningful to them and their communities (Dewey, 1998; Gruenewald, 2003). While this idea is not new, school practices in many parts of the world consistently fail to connect to students' placebased experiences. In Nepal (Paudel et al, 2024), teachers were often found to be competent in presenting curricular content related to diversity and environmental protection, but without connecting to children's experiences of discrimination and environmental precarity, especially for the most socially marginalised. In Peru, as discussed by Balarin and Rodríguez (2024), we similarly found contradictions between official school knowledge on justice-related topics and Peruvian students' understandings and experiences of these issues. The authors argue that the rich source of knowledge that experience provides is rarely discussed in class meaning that the possibility of gaining a deeper understanding of many issues was therefore lost. These rich qualitative findings were corroborated in the quantitative analysis from the survey with secondary school learners in Nepal, Peru and Uganda. Shields and Muratkyzy, (2024) report on this analysis and demonstrate the centrality of experience and how the disconnection from experience within education severely limits young people's dispositions to act towards sustainable transformations.

When schools do not support children to understand and express their own experiences, they obscure these from what is viewed as valuable for collective understanding of a particular issue. This disconnection from experience and place which we found to be so central in the JustEd Project (Soysal et al, forthcoming; Shields and Muratkyzy, 2024), can limit students' possibilities of accessing knowledge and disempower them from taking meaningful action (see also Gruenewald, 2003; Ajaps and Mbah, 2022). Fricker (2007) has highlighted the particular hermeneutic form of epistemic injustice that can occur when people do not have access to the interpretive resources that might enable them to make sense of their own experiences.

We contend that a focus on experiences is particularly important for young people who are themselves already at risk of hermeneutical injustice. It is through such place-based knowledges that they may be able to make the connections between their experiences of marginality, oppression and exclusion and broader structural and causal processes (Spivak, 2023), which in turn could develop their potential for political and community-oriented action.

Enabling learners to participate in the consumption and production of knowledge requires *rich pedagogies* that promote critical thinking and an understanding of complexity. Dominant pedagogical models, either content-centred or competency-based, often fail to do so (Schweisfurth, 2011; Biesta, 2016; Hoadley, 2018). Whereas the former often conflates knowledge with content, the latter may end up disregarding knowledge. The case studies within the JustEd Project, included both models. Paudel et al (2024) show how the content-dominated pedagogies prevalent in Nepal do not foster student participation or the articulation of experience into the learning process, and this limits students' understanding of different issues. The role of dominant languages of instruction in Nepal and Uganda were also shown to place clear restrictions on students' access to knowledge and participation in learning (see Milligan et al, 2024 for a discussion of this in the Uganda case).

Balarin and Rodríguez (2024) conceptualise the 'shallow pedagogies' that may emerge from different pedagogical models, especially when they are not accompanied by clear guidelines and support for teachers' practice. What we saw as a result of these shallow pedagogies in Peru, Nepal and Uganda is the ways that students can embrace simplistic narratives that 'do not problematise nor point towards the complexity of many issues and phenomena' (Balarin and Rodríguez, 2024: 14), thus limiting their capacity for transformative action. We note that there is an example from within this special collection that provides a contrasting example of how a competency-based curriculum can be made to work when a clear pedagogical strategy is in place (Copsey et al, 2024). In their case they discuss a collaborative community-based climate-action project where school and community members co-created knowledge to improve the community's quality of life. This is one of many examples of richer pedagogies that are, however, rarely mainstreamed in a global policy context dominated by the narrow focus on measurable outcomes.

The possibility of developing rich pedagogies rests not only on teachers' abilities, but also on schools and students having access to a broad range of epistemic resources. These include a range of materials and content that are accessible - especially in terms of language - that provide sound, well-justified knowledge, as well as a diverse representation of different knowledges and perspectives that can enrich students' understanding of the world. In a similar vein to the contradictions already highlighted between young people's experiences of injustices and curricular content on justice-related issues, Nuwategeka et al (forthcoming) argue that there are conflicted epistemologies between Indigenous knowledge systems and Western-based knowledge. Their arguments, drawn from interviews with teachers and students as part of the JustEd Project in Northern Uganda, also highlight how these communitybased knowledges are rendered absent from what is deemed the collective pool of epistemic resources for climate action. This mirrors Masaka's (2019) argument about the importance of not only diversifying curricular content – a shallow form of recognition – but also considering how such diversity of knowledges may frame young people's current and future actions.

Strengthening the epistemic core of education through connection to experience and place, rich pedagogies and access to a broad range of epistemic resources can support young people to contribute themselves to the collective pool of knowledges. This involves young people learning how to become critical thinkers who understand that knowledge needs to be based on 'analysis', 'evaluation' and 'inference based upon evidence, concepts, methods, criteria, and contexts', which can self-correct based on the emergence of new knowledge and facts (Boghossian, 2012: 77). But it also requires that young people develop epistemic humility (Medina, 2012), an openness to other people's views and an understanding of the 'epistemic value of diversity' that does not lead to relativism (Robertson, 2013).

We see here a key connection between strengthening the epistemic core and the complex global social challenges that we now face. Such challenges require students that are prepared 'to think for themselves', that can grasp complexity, but who can also 'be good consumers of public knowledge' (Robertson, 2013: 176). This is especially so in a global context in which young people are continuously fed simplistic and tendentious ideas about some of the most pressing problems we now confront. This capacity to think for themselves and grasp complexity may also be conducive to an understanding that solutions require more than individual actions and should involve a range of actors and changes at different levels. When this is done in a way that connects experience with a diversity of knowledges, this can support young people to engage in local and community-based initiatives to effect meaningful change (Cruz et al, 2018).

Conclusions

Our paper began with a critique of dominant understandings of the role of education *for* justice, which, we show, are underspecified and give priority to narrow outcomes rather than to equity concerns. We argue that that such a focus means also that the justice potential of education has been articulated mostly in terms of the role of education *for* justice rather than education *as* justice. This leads to an often unrealistic burden of responsibility for education in relation to justice aims. At the same time, the dominant discourse on educational outcomes, and the measurement regime to which it is associated, place very little emphasis on educational processes, making it unclear how exactly education is meant to contribute to justice.

We have also argued that the potential contribution of education *for* justice is limited by epistemic injustices that are at the core of educational practice, but which are notably missing in current justice debates. One such injustice relates to the absence of necessary connections to experience and place which limits students' potential to understand and make sense of knowledge. We argue that a further epistemic injustice has to do with shallow pedagogies prevalent in many school systems that hinder students' possibility of becoming critical and independent thinkers. The lack of diverse epistemic resources further disrupts students' possibility of becoming equal participants in the consumption, recognition and production of knowledges. To respond to these injustices, we have called for focusing on the *epistemic core* of educational practice that would enable education to function as a space where justice is done.

The mobilisation of the epistemic core is impacted in many schooling situations by a range of educational and broader issues. Some of these structural barriers are within the remit of an individual school or the wider educational system, for example in relation to language policies as discussed by Milligan et al (2024). However, there

are many others that are determined by the precarity, violence and injustice ever present in young people's lives outside of school. Milligan et al (2024) stress this point in their discussion of shallow pedagogies and are careful to note that the role of schools should not be essentialised, especially when they cater for socially (and hermeneutically) marginalised populations. The authors also highlight the extent to which teachers themselves are part of epistemic and economic regimes that limit the scope of their pedagogical action. Focusing on the epistemic core is one of multiple transformations that might be necessary in these contexts, and we are mindful about the need to not overburden young people with the responsibility of action – especially those whose socio-economic conditions and the consequences of economic and environmental precarity limit their 'capacity to aspire' beyond immediate concerns (Appadurai, 2004). An educational agenda that is strongly focused on strengthening the epistemic core might seem overly idealistic, especially in view of some of the limitations we have just outlined. While certainly challenging, we believe this could be achieved through a greater focus on modelling teaching practices, on providing ongoing pedagogical support for teachers, and on developing curricula and materials that also support practices geared towards strengthening students' role as knowers there are now several examples how to model practice in ways that address various aspects of the epistemic core (Tickly et al, 2020; McLean, 2024). This all may seem fairly straightforward, but such a strong focus on process and practice goes very much against the grain of dominant global education policy agendas, with their focus on outcomes, incentives and efficiency.

While considerations of epistemic justice are fundamental throughout the educational cycle, the role of schools and teachers in strengthening the epistemic core is particularly important at the secondary school level, where students are encountering more complex knowledge and when they are more specifically meant to develop the abilities to engage with knowledge in epistemically just ways. Content-wise, it is also at this level where issues related to current global social and environmental challenges are often presented to young people with the notion that this should influence their future action. While there are currently many proposals for how to rethink and transform secondary education (Tikly et al, 2020; Steinberg, 2022), they do not pay enough attention to the centrality of the epistemic core that grounds education *for* justice on an understanding of education *as* justice.

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Conflict of interest

The authors declare that there is no conflict of interest.

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