

Designing for resistance: epistemic justice, learning design, and open educational practices

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554

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Abstract

Purpose – To encourage more just open educational practices, the purpose of this paper is to describe Jose Medina's theory of epistemic justice and develop a framework applying this conception of epistemic justice to OEP through learning design. The authors hope this framework will help researchers and practitioners develop more equitable learning experiences in open educational contexts.

Design/methodology/approach – This paper is conceptual and design-oriented. This paper seeks to draw relationships between José Medina's work in *The Epistemology of Resistance*, recent empirical studies in learning design and OEP. By analyzing relationships between these works, this paper lays out design principles that can empower educators seeking to create equitable open learning experiences.

Findings – This paper finds several generative intersections between the social justice centered epistemology presented by Medina, empirical learning design studies and OEP. This study finds that structured learning designs which integrate well-researched principles may provide guidance for further practice and research in ways not generally discussed in open education literature. This paper builds on these findings by describing practical ways these intersections can be implemented in OEP.

Originality/value – To the best of the authors' knowledge, this is the first theoretical analysis of the relationship between epistemic justice and OEP.

Keywords Internet, Multicultural, Learning, Education, Equity, Pedagogy

Paper type Conceptual paper

Introduction

This paper explores a framework to help address the “justice problem” of open education practices (OEP). As we theorize it, the justice problem of OEP is a specific manifestation of a more general problem of distributive educational justice. Namely, learners with greater resources or power more readily dominate, consume or otherwise take up time, energy and attention. Educational spaces (e.g. virtual learning platforms) exist, and educational activities (e.g. group learning projects) are undertaken, under conditions of social injustice. The same observation applies to OEP and open educational resources (OER). To fulfill the progressive, democratic, egalitarian aspirations of OEP and OER, careful attention must be paid to pedagogical design so that OEP do not inadvertently reproduce existing educational injustices.

In a recent paper, [Bali et al. \(2020\)](#) address some of these issues by presenting a typology of OEP from a social justice perspective. Their typology deals with large-scale OEP: structures at the course or curriculum level, as well as the selection of high-level practices,



assignment types or modalities of OER. We similarly draw from theories of social justice – in particular, a theory of *epistemic justice* – and recent learning design research, but argue that these practices and modalities can be implemented in ways that have negative impacts even when they are implemented with the best intentions. We will argue that some of these negative impacts happen not at the level of activity type or modality, but in specific design practices. However, by changing specific design practices, negative impacts can be ameliorated, and transformative impacts unlocked, even within the same modality or assignment type.

Prior to [Bali et al. \(2020\)](#), [Lambert \(2018\)](#) wrote insightfully that the prior 10 years of open education (OE) did not intentionally center the needs of those they purported to serve, and that various types of justice were regularly not present in discussions of OE. We advance this line of understanding by analyzing the role of *epistemic justice* in OEP, while specifically addressing design changes to OE learning assignments. Like [Bali et al. \(2020\)](#), [Lambert \(2018\)](#) focuses on large-scale OEP movements and conceptualizations. While this work is important, changes must be made at large *and* small scales – at conceptualization, modality and design – to realize socially just OE.

We are interested in how concepts featured in accounts of *epistemic injustice* can be leveraged and operationalized in the service of designing just OEP and theorizing principles of transformative OEP. We draw our main conceptual framework from the work of social and political philosopher José Medina, in particular his discussion of epistemic injustice in *The Epistemology of Resistance: Gender and Racial Oppression, Epistemic Injustice, and Resistant Imaginations* (2013). By applying Medina's philosophy to design for OE, we hope to encourage and empower the creation of equitable OEP by describing changes that can be made in the everyday use of OEP.

Part I of this study gives a broad introduction to Medina's social epistemology in *The Epistemology of Resistance* by focusing on core concepts we think can be usefully transferred to discussions of pedagogical design within OE communities. These include: *testimony*, *epistemic virtue*, *epistemic vice*, *epistemic friction*, *meta-insensitivity* and *meta-lucidity*.

Part II discusses a set of recent empirical studies of group learning activities and suggests that epistemic injustice, as Medina conceives it, can be perpetuated by OEP activities that would appear to be equity-oriented. These same studies, however, suggest that the perpetuation of this injustice is at least partly a *design* flaw. In other words, the studies show the potential of well-structured activities to help mitigate the problem of epistemic injustice if design flaws are fixed. In this way, we begin to draw a connection between equity-oriented OEP and equity-oriented learning research.

In Part III, we extend the conclusion of Part II by suggesting four principles for the design of collaborative assignments that maximize epistemic justice and help students cultivate epistemic virtues in an OE context. We relate these principles to Medina's work, and three additional group learning activities – *Peer Instruction*, *Think-Pair-Share* and *IRS/Legacy Challenge Cycles* – showing how these activities can either perpetuate or mitigate epistemic injustice depending on specifics of their design. This section includes practical guidance that practitioners, even those not engaged in school or curriculum level open projects, can implement in open learning activities. A conclusion proposes some possible next steps for empirical researchers and education practitioners.

Part I: Medina's social epistemology

[Medina's \(2013\)](#) theory of epistemic injustice attempts to make sense of how social injustice distorts the knowledge-sharing, or *testimonial* (p. 28), practices of people who occupy different social positions [1]. In this view, the giving and taking of *testimony* (communicated knowledge) does not occur in a cultural vacuum; rather, it is significantly inflected by the

social imaginary: the “repository of images and scripts that become collectively shared,” and which “constitutes the representational background against which people tend to share their thoughts and listen to each other in a culture” (p. 67). Under conditions of oppression, the social imaginary is severely distorted: members of historically oppressed groups suffer from systematic deficits in the attribution of testimonial credibility because of culturally circulated representations depicting them as incapable of possessing knowledge and unworthy of sharing true beliefs. They are disproportionately and unjustifiably deemed *incredible* in their knowledge-sharing acts and knowledge-building practices. The inverse is also true: members of historically dominant groups are afforded an unjustified *excess* of epistemic authority [2]. On average, we believe them *too much* relative to the degree of trust they have earned, even if each individual decision to trust must be judged on its own merits.

Disproportionately extending epistemic authority to members of historically dominant groups may instill bad character traits as they internalize bad epistemic habits. Medina refers to a person or group with such habits as “epistemically spoiled.” For Medina, “those who are epistemically spoiled have a hard time learning their mistakes, their biases, and the constraints and presuppositions of their position in the world and their perspective” (p. 30). Being in a position of greater social power may confer pleasure and wealth, yet gravely risks corrupting one’s epistemic character by cultivating what Medina refers to as *epistemic vices* (pp. 30–40). The three he focuses on are *epistemic arrogance* (p. 31), *epistemic laziness* (p. 33) and *closed-mindedness* (p. 34). These are, respectively, a kind of cognitive superiority complex stemming from an overestimation of one’s cognitive powers; a lack of curiosity about areas of life or social domains that one has not had to concern oneself with; and a kind of epistemic “hiding,” or avoidance of knowledge that is difficult to accept or acknowledge (especially because of how it might implicate oneself in the perpetuation of social injustices). These and other epistemic vices feed off one another and can express themselves through certain wrong-headed views of social reality. Defensive avoidance of explicit discussion of one’s dominant racial or gender identity, for example, involves all three vices (pp. 36–38) [3]. The *actively ignorant subject* is a type of person who has developed this suite of epistemic vices and can be interpreted as playing an active role in the maintenance of their own ignorance. They can therefore be blamed for having “epistemic attitudes and habits that contribute to create and maintain bodies of ignorance” that reproduce social injustice (p. 39). They suffer particularly from a form of insensitivity we might label *meta-insensitivity* – a “cognitive and affective numbing” (p. 89) that afflicts those who are deeply unaware of (and uninterested in) self-knowledge, knowledge of others and facts about empirical reality related to social injustice.

The flip side of this coin is that members of historically oppressed groups, while suffering on average from deficits of attributed testimonial credibility, power, wealth, access and so on, are nonetheless more likely to develop a subset of what Medina calls *epistemic virtues* (pp. 40–48) [4]. The three prototypical examples are *epistemic humility* (p. 43), *intellectual curiosity/diligence* (p. 43) and *open-mindedness* (p. 44). These are, respectively, a humble and self-questioning attitude toward one’s cognitive abilities that can facilitate learning processes (p. 43); an interest and fastidiousness in learning new bodies of knowledge due to special incentives generated from the need to survive and flourish under oppressive conditions; and an ability to extend beyond one’s parochial perspective or the standpoint of one’s group, arising particularly from acknowledging differences between one’s own perspectives and the perspectives of dominant others (p. 44). In a compelling analysis of the Mexican poet and philosopher Sor Juana Inés de la Cruz and the Black American civil rights activist Rosa Parks, Medina illustrates a distinctive type of character formation: the *meta-lucid* subject who is “aware of the effects of oppression in our cognitive

structures and of the limitation in the epistemic practices (of seeing, talking, hearing, reasoning, etc.) grounded in relations of oppression” (p. 192). *Meta-lucidity* is a “crucial cognitive achievement” attained by the subject who is “aware of a whole body of ignorance, a set of blind spots, to which others remain insensitive” (p. 196). The meta-lucid subject exhibits lucidity not just about the social world, “but about the cognitive attitudes, cognitive structures, and cognitive repertoires of those who navigate that social world” (p. 196). This type of lucidity can be triggered or cultivated by experiences of, for example, what the Black American sociologist, philosopher and activist W.E.B. Du Bois termed *double consciousness*: the “capacity to entertain two perspectives, two ways of thinking, and two ways of looking at the world” (p. 192) as a result of directly experiencing one’s own degradation and the mechanisms of oppression and social distortions that produce it (p. 196).

Educators might ask Medina the following question: how does one harness the intricate framework outlined above to cultivate people who are epistemically virtuous and meta-lucid? Medina’s response would undoubtedly draw from his notion of *epistemic friction*. It is useful here to think of friction in a basic metaphorical sense, as the result of opposing forces exerting energy on one another. In Medina’s account, the forces that interact and form resistances (p. 1) may be either *internal* or *external*, and (p. 2) result in *beneficial* or *detrimental* friction. Imagine, for example, an *internal* force (your belief in your own diligence) rubbing up against an *external force* (a script from the social imaginary depicting you as unproductive because of your disability). Upon meeting, these opposing forces create resistance. For Medina, this resistance may result in *beneficial epistemic friction* if the tension between these two forces motivates you to develop insight, powers of self-criticism, the ability to meet justificatory demands and recognize cognitive gaps and so on. However, they risk producing *detrimental epistemic friction* if the tension between these two forces deteriorates your confidence, causing you to become inhibited or insecure. Good pedagogical design would focus, then, on accurately identifying the internal and external forces at play in any given educational context and directing them intelligently to maximize opportunities for beneficial epistemic friction [5]. We purposefully state this overarching guideline in general terms here and explore detailed manifestations of it throughout the rest of the paper.

Part II: Empirical studies parallel Medina’s framework

Collaborative learning and group knowledge creation is core to the development of OEP. The broadest possible definition of OE evokes any use of OER. Increasingly, however, OEP uses the removal of constraints on editing, remixing and creation to assign learners to open knowledge construction, asking them not only to absorb, but to engage in remixing, writing or editing (Bali *et al.*, 2020). In higher education, these types of practices have also been called “OER-enabled pedagogies” (Wiley and Hilton, 2018). Notable examples have included: creating and editing Wikipedia articles (Azzam *et al.*, 2017), annotating open documents and resources (Brown and Croft, 2020), using collaborative reading technologies (Liu *et al.*, 2015) and co-writing open textbooks and anthologies (DeRosa and Robison, 2017).

Within these OEPs, social epistemology is clearly an active concept. It is fundamentally the *testimony* of learners that is being evaluated as worthy of inclusion in evolving OER. Likewise, especially when learner groups participate in remixing, editing and writing, learner contributions or testimonies are evaluated by peers and teachers. This is true of a broad swath of OEP, from K-12 learners annotating open texts (Kalir, 2019) to the group work of PhD students, educators and researchers developing open software (Arimoto *et al.*, 2016). In these circumstances, testimonial justice matters, because proper transmission of and regard for learner testimony is central to the contributions learners are making to open knowledge, and therefore to the quality and integrity of OERs and to learning experiences

involved in creating them. As sociologists and philosophers of social science have argued, the value of testimonial justice goes beyond benefits to student emotional well-being: an inclusive and diverse learning and research community adds objectivity, creativity and validity to processes of discovery and justification (Harding, 2015; Tuhivai Smith, 2021).

Given that OEP express social knowing and exist in contexts of epistemic injustice, we can compare theories of epistemic justice with learning designs for group assignments. These groups often include learners from both historically marginalized and dominant groups, who bring to the classroom distinctive sets of epistemic virtues and vices. We are unaware of empirical research in OEP equitable learning design, so we leverage research in group active learning and learning design to explore these principles. This research presents a strong empirical complement to Medina's theoretical work. We focus initially on two specific cases, Grunspan *et al.*'s (2016) research into classroom perception of student expertise by gender, and Theobald *et al.*'s (2017) research into the performance of groups of learners when one student dominates group discussion. We suggest the findings of these studies can be taken as examples of *testimonial injustice* and are directly related to the notion that *epistemic virtues* and *vices* are expressed by learners building and sharing their knowledge. Particularly in the second study, there are suggestions of design choices that can ameliorate epistemic vices and encourage epistemic virtues in OEP.

Grunspan *et al.* (2016) asked students to name the most knowledgeable students in three iterations of the same large undergraduate biology course (p. 5). The researchers found that men nominated men so much more frequently than they nominated women, women had to outperform men by more than half a letter grade (0.765 points on a four-point grade scale) to be as likely to be nominated (p. 6). By contrast, women in these courses nominated their peers in a pattern much more closely aligned to the skill indicated by their grade (p. 6). In addition to a general difference in the attribution of expertise, the study documented "celebrity" students who were broadly acknowledged as having expertise. Across the three courses, the 3–4 most nominated students were all male, and the researchers noted that maleness was a predictor among these learners for celebrity status (p. 9). At the end of the study, the authors note several reasons the identified biases are stronger and more widespread in STEM fields other than biology (p. 12).

Men disproportionately acknowledging or recognizing other men's skill and underestimating women's skills is a form of epistemic injustice: women's testimony of their skill in this context is disregarded, male testimony is overestimated. In Medina's terms, this study identified a tendency of men to exhibit a gender-specific form of *epistemic arrogance*. In turn, we may label the women's more accurate evaluation of learners' knowledge as a product of epistemically virtuous testimonial practices. The underestimation of women's knowledge easily risks triggering *detrimental epistemic friction* if it discourages women from pursuing work and ways of life in which their testimony will be undervalued. (The same general idea applies to epistemic injustice between settlers and natives, between those who present as straight and those who present as queer, between those who bear upper-class markers and those who bear markers of poverty, and so on.)

Notably, this potential detrimental epistemic friction occurred despite the teachers' attempts to create a course that encouraged learners to participate by expressing their expertise. Learners beginning the exercise in a socially dominant position extended that dominant position. Relating back to OER, this calls into question Bali *et al.*'s (2020) classification of Virtually Connecting OEP (opening conversation between attendees of a conference and those who cannot attend) as "[ameliorative] (toward social justice) when dominant voices are amplified and other participants don't get room to speak or challenge"

(p. 6), which the authors recognize as a risk later in the article (p. 8). While Grunspan *et al.* were specifically investigating the impacts on women's voices, it is important to note that very similar impacts have been observed and described consistently by people experiencing oppression in relation to other identities, including, for example, race (Collins, 2008) and indigeneity (Betasamosake Simpson, 2017).

Grunspan *et al.* (2016) do not discuss how educators might construct activities that mitigate epistemic vices. However, following a related line of research, Theobald *et al.* (2017) tested jigsaw activities as a way of promoting positive interdependence. Jigsaw activities were developed by Aronson *et al.* (1979) to increase the effectiveness of group work in desegregated classrooms by reducing competitiveness and increasing interdependence (p. 438). In a jigsaw activity, learners are assigned to groups, lesson materials are divided up within groups, giving each learner a unique piece of information. Learners are tasked to assemble this "jigsaw" of information, with each taking the role of "expert" in the piece of information they are given (p. 441).

Theobald *et al.* (2017) were interested in emotional factors contributing to successful group work. They asked learners how comfortable they were in their groups, if they had a friend in the group, and if someone had dominated the discussion. They asked this after two variations on small-group discussion were introduced: one relatively unstructured, and the other using a "jigsaw" model to structure collaboration. Learners in both conditions took a pre- and post-test on the subject matter they were reviewing.

Several findings from Theobald *et al.*'s (2017) research are of interest as we think about minimizing negative impacts of overly dominant voices within OEP. First, groups that reported a dominator consistently scored lower on a post-test of subject matter comprehension by one full question, or about 12% (p. 7). Groups reporting high levels of comfort scored higher on their test than groups not reporting comfort (p. 7). In short, a group member dominating discussion diminished the whole group's ability to learn, and group comfort increased the ability to learn (p. 13).

This research also found that specific learning designs can contribute to changes in this chain. Groups assigned an interdependence-encouraging jigsaw activity reported fewer dominators and scored higher on post-tests. This was a strong result – a jigsaw activity resulted in 70% lower likelihood that learners "strongly agreed" one learner dominated the discussion (p. 7). The study design alternated groups between jigsaw and unstructured activities, and found the same groups who experienced a dominator, and hence lower test scores, in unstructured conditions, did not report a dominator or experience lower scores in a jigsaw activity (p. 4).

These findings parallel Medina's descriptions of the impact of epistemic vice on the whole community of knowers. Epistemically lazy practices have negative impact on the epistemic character and effectiveness of the whole group. More vitally, these findings indicate that design choices within an assignment can help groups express epistemic virtue. In short, structured interdependent exercises, like jigsaw exercises, can make beneficial epistemic friction easier to achieve by limiting the impact of epistemic vices on group learning (possibly by deactivating detrimental scripts from the social imaginary, or alternatively by modulating the contributions of epistemically vicious characters). Note that in unstructured activities, neither dominant voices were explicitly rewarded nor were learners explicitly in competition. Nonetheless, learners competed for time and space to express their ideas. A change of design at a small level ameliorated, and perhaps even transformed, this practice.

In the next section, we describe design principles that align with both Medina's description of epistemic justice and research in learning design that can be applied broadly

within OEP. We will compare these principles with well-researched learning designs to articulate ways these principles can be implemented in OEP.

Part III: Designing for beneficial resistance

Alignment between theories of epistemic justice and learning design principles holds great potential for OEP because it suggests ways to cultivate epistemic virtues while drawing learners into deeper participation with open knowledge and creating better OER. Given that epistemic injustice crosses all contexts of learning, designs intentionally rooted in epistemic justice may improve learning across various contexts, including K-12, higher education and workplace learning, and across technologies.

By taking epistemic justice as a regulative ideal and using it to offer additional guidance to learning designs, we can derive design principles to instigate positive *epistemic interdependence* by encouraging *beneficial epistemic friction* in OEP. In this section, we will briefly propose four principles, and then discuss them in the context of three well-researched instructional designs – *think-pair-share*, *peer instruction* and *challenge cycles* – and apply them to OEP.

Principle 1: Provide opportunities to build individual expertise

At core, group OEP will be most effective and most just when every member of the learning community has an opportunity to authentically contribute to the group product. One member of the learning group dominating the conversation by doing most of the work (or detracting from work) and then presenting it as group work is both dishonest and damaging to the learning process, as demonstrated by Theobald *et al.* (2017). However, not all learners come with the same level of preparation in the subject to immediately contribute to group knowledge, particularly in domain-specific discussions. As such, it is useful to give opportunities for learners to prepare contributions. This can be done through a moment of reflection, as in think-pair-share, or through structured assignments as in jigsaw activities or challenge cycles.

Principle 2: Guide learners to take turns

As discussed by Theobald *et al.* (2017), jigsaw activities give learners instructions to take turns in sharing knowledge (p. 12). This was likely a key factor preventing one voice from dominating discussion. It is impossible for the testimony of historically marginalized people to be evaluated properly if it is denied the opportunity to be expressed. So, teachers or anyone guiding a learning community interested in epistemic justice can use explicit turn-taking in their instructions to facilitate equity. This has broad application for OEP, from how a class attends to different learners' annotations, to who is contributing in renewable assignments, to who has opportunity to connect when Virtually Connecting. Across these and other practices, giving explicit instructions to take turns, as well as modeling and encouraging habits of taking turns, and listening equitably to learner input or views, can help students learn equitably.

Principle 3: Emphasize factual feedback

Feedback is central to the learning process. It is also central to the process of creating strong OERs. Perhaps most importantly, it is important to the formation of epistemic character – it is, at least when well deployed, a key element of *resistance* that offers recognition when we are wrong, and encouragement when we are correct. It can limit epistemic arrogance and encourage the epistemically humble. However, it is unlikely to live up to this potential if guided by a teacher's or peer's preference for particular students' work, or work of a particular type.

Principle 4: Evaluate the process

Especially for learners operating in a context of stress and complexity, there can be apparent benefits to ignoring the reality of epistemic injustices. Accepting cultural norms can speed up production of an acceptable assignment submission. It can be tempting to defer to an apparently knowledgeable group member. Several learners in [Theobald et al. \(2017\)](#) explicitly spoke to this, saying that they did not mind someone dominating the discussion, as they perceived that person to be the most knowledgeable (p. 11).

While educators sometimes cannot intervene directly to halt epistemic injustices, they can emphasize following processes of virtuous social knowledge construction. By evaluating how learners follow these processes, rather than or in addition to focusing on whether end products meet certain criteria, practitioners of open learning can emphasize just elements of open learning and give learners feedback on developing epistemic virtues.

Examples of designs that use these principles

Several existing well-researched and validated instructional activities integrate some of these principles into their designs, but these must be implemented intentionally to maximize equity. Jigsaw activities use these principles by beginning with an opportunity for learners to build individual expertise, then giving learners instructions to take turns. Notably, jigsaw activities do not necessarily require turn-taking and can be implemented without this important feature – so practitioner understanding of design principles is necessary in creating more epistemically just practice. Jigsaw activities can also lack a feedback stage, as they do not necessarily require an evaluation of the learners' contributions. They are explicitly strong, however, in developing individual expertise.

By comparison, peer instruction and think-pair-share models rarely include a step in the process where learners develop individual expertise, but explicitly prompt turn-taking and excel in providing feedback. Peer instruction, as developed and described by [Crouch and Mazur \(2001\)](#), involves learners answering a factual question, which the instructor intentionally constructed to be difficult to answer at learners' current level of knowledge. Learners take turns saying why they answered the way they did, and finally re-answer the question before seeing the teachers' answer. This involves learners in cycles of feedback, improvement and listening to each other. Think-pair-share ([Lyman, 1981](#)) in which learners "think" (or write) individually, then pair up to discuss their thoughts, then share with the whole group, emphasizes the development of individual knowledge through reflection in the "think" phase, but often struggles to minimize dominant voices during the pairing and sharing portions unless explicit prompts are given to take turns during "pairing," or random call or similar methods are used in "sharing."

One more worth mention is the IRIS Stars Legacy Cycle, also known as the Challenge Cycle, developed by [Schwartz et al. \(1999\)](#). This model was explicitly created to help teachers integrate four aspects of how people learn: Learner Centered, Knowledge Centered, Assessment Centered and Community Centered. We cannot help but note the parallels to [Bali et al.'s \(2020\)](#) framework of content-centric, process-centric, teacher-centric, learner-centric and primarily pedagogical (assessment centered) to primarily social justice focused (community centered) (p. 2).

In Challenge Cycles, learners begin by confronting a challenge, documenting initial thoughts, then compare these with existing resources, and finally, reflecting on differences and producing new documents that compare the two. These cycles closely parallel the principles we posit. Comparing initial thoughts with expert perspectives and resources develops individual expertise and provides feedback, and learners take turns to share these comparisons and their growth.

Each of these well-researched group learning designs implements some of the design principles we articulated. These principles are also applicable to OEP. Students can create OER with or without attention to turn-taking. Learners can receive feedback from teachers on their Wikipedia entries or get “flamed” by other editors. OEP assignments can emphasize processes of equitable knowledge creation or over-emphasize rapid creation of an OER, even if through the sacrifice of opportunities to include multiple voices. In any of these cases, however, the transformative power toward a more just practice is not held only in which practice is selected, but in the design through which that practice is carried out.

Conclusion: shared goals and potential next steps

Open educators want to help learners not only to learn subject matter but also to participate in knowledge creation in ethical ways, in other words, to develop epistemic virtues. Significantly more research is needed before we can conclude the principles we articulate verifiably help learners develop epistemic virtues. However, in this paper, we have laid out a framework for how to conceptualize the development of epistemic virtue through specific design choices within OEP. We began by laying out key concepts from Jose Medina’s work *An Epistemology of Resistance* (2013), such as *epistemic virtues*, *epistemic vices* and *beneficial epistemic friction*. Working from recent active learning research, we argued that design choices within OEP can negatively or positively express these concepts. Finally, we proposed design principles we find at an intersection of epistemic justice, learning design and OEP. Using this conceptual development, we can plan research and work to further maximize the value of OEP for learners everywhere. In the spirit of openness, much of this research will be done best if practitioners take up sharing how they might design for epistemic justice in their assignments.

For practitioners interested in implementing the learning designs we discussed directly into OEP, we described specific designs. In their simplest form, these can be ways of helping learners reflect on the OERs that they engage with. In more complete forms, these designs have also been implemented within OE platforms, as peer instruction is in Open edX ([Englund et al., 2021](#)). However, greater potential may lie in using these and similar designs as methods for involving learners in the co-creation of OER, shaping them into renewable assignments. For example, peer instruction can be used to validate existing open resources and provide learner feedback on how well these resources are understood. For a more complex example, challenge cycles could be implemented as a process for co-constructing OER.

Open educators interested in designing transformative, socially just courses should attend both to choice of practice, and to design specifics within these OEP to ensure the justice and efficacy of these practices. Furthermore, we note that attending to these nuances using Medina’s conceptual tools should easily complement anti-oppressive pedagogical approaches framed using other vocabulary and discourses, such as that of decoloniality. (Indeed, one can easily trace how colonialism and neocolonialism both depend on and perpetuate testimonial and hermeneutic injustices.) As teachers and researchers develop these practices further, we hope new principles or new articulations will be developed and that this conceptualization will mostly serve as generative.

Notes

1. Medina focuses on racialized groups and women. His approach has been critiqued for lacking an analysis of capitalism as a structural cause of oppression that co-constitutes and is coextensive with racial and gender-based oppression. See [Ferguson \(2013\)](#). We recognize this weakness while drawing from the strength of the fine-grained account of just and unjust social interactions Medina nonetheless provides.

2. The stereotype here is of the White, straight, cisgender man who confidently asserts wrongheaded opinions to an audience of experts who do not share his identity markers.
3. In traditions of law and policy, this has also been referred to as a “color-blind” or “gender-blind” approach. We refer to the ableist term to better contextualize this discussion historically.
4. A caveat here is worth noting. Medina is clear that epistemic virtues and vices are *not exclusive* to any one group, are *not universal* features of the epistemic character of any group and are *not automatic* features of the epistemic character of any group. The analysis of epistemic virtues (e.g.) in relation to historically oppressed groups is a tool used to elucidate the “particular shape that these epistemic virtues can acquire among oppressed subjects and their distinctive genesis under conditions of oppression” (43). In other words, Medina is not engaged in an essentialist project. He notes, commonsensically, that members of historically oppressed groups can manifest epistemic vices (and that these can take a particular shape) and that members of historically powerful groups can manifest epistemic virtues (and that these can take a particular shape).
5. The *subject matter* of pedagogical activities may in addition, of course, draw attention to harmful components of the social imaginary.

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