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Irreconcilable knowledges?: A way forward

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Abstract

This article considers the realm of knowledge in early childhood education (ECE); what knowledge is valued, and how different types of knowledge position children and educators. To this end, two different examples of practice informed by different types of knowledge are provided: one from an educator working in a long day care service (Duncan) and a second, a national assessment of young children's development, the Australian Early Development Census (AEDC). The two examples reflect practices that one might see in Australian ECE settings, and due to governance and regulations, both illustrations could be evident in the same context. Using a dialogic approach we provide an insight into the requirements of the everyday work of educators and the disparate and often irreconcilable understandings of knowledge that inform their everyday work. We conclude with some suggestions for more equitable approaches and identify some of the challenges of attempting to do this.

Keywords

Equity, justice, knowledges, dialogic, assessment

Introduction

The prompt for this Commentary was a conference presentation at the 2022 *Australasian Journal of Early Childhood Research Symposium* where specific views about the types of knowledge that are conducive to supporting young children's learning were presented. The presentation

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provoked discussion and subsequent meetings where self-selected participants engaged in debate about key concepts currently prominent in ECE that include outcomes, quality, testing, interventions, evidence-based practice, investment, human capital, neoliberalism, markets, and readiness. More specifically for us, the discussion was about how data from standardised instruments might inform policy, but equitably. Our group of four consists of one Biripi (Aboriginal) Australian male service leader (Adam Duncan) and three Anglo-Australian female academics (one developmental psychologist and two curriculum theorists; Cathrine Neilsen-Hewett, Susan Grieshaber, Kate Highfield) working in different universities. Our key concerns are educational equity and justice, the types of knowledges (epistemologies) that offer opportunities for educational equity and justice, and how they might be realised. Accordingly, our key question is: What epistemologies offer opportunities for educational equity and justice and how might they be realised? In what follows we briefly locate the discussion in the context of neoliberalism and human capitalism and the types of knowledges associated with these perspectives, and the challenges associated with these approaches for educational equity and justice. After the method of dialogic engagement is explained, the dialogic outcome is presented as multivocal data excerpts that focus on the AEDC. Before concluding, we consider changes that look beyond the AEDC which offer more just and equitable research approaches.

Our discussion is set in the current context of increased use of measures of performance such as monitoring, assessing, and testing (e.g., transition statements); data-based governance (e.g., increased demand for documenting practices using written and/or numerical data), and accreditation and regulation (governance) systems such as the National Quality Standard (NQS) (ACECQA, 2020). Datafication of children and childhoods is not unique to Australia, and has been documented in England (Bradbury, 2019; Roberts-Holmes, 2015), Finland (Paakkari et al., 2023; Panaanen & Grieshaber, 2022), and globally (Roberts-Holmes & Moss, 2021). However, approaches to governance have not resulted in improvements in key indicators of equity such as access and achievement (European Commission, 2022; Urban & Rubiano, 2014), probably because structural disadvantages concerning race, poverty, and disability are not considered. The global context in which many of these concepts (outcomes, quality etc.) have become ubiquitous involves neoliberalism (a multifaceted and complex notion itself), which Sims (2017) says has caused “a devastating impact on the early childhood sector with its focus on standardisation, push-down curriculum, and its positioning of children as investments for future economic productivity” (p. 1). In a one sentence summary of neoliberalism, Roberts-Holmes and Moss (2021) said that it “reduces everything to the economic” (p. 7). Neoliberalism also implies a “human capital view of education” where the “the overriding goal of education is to develop human resources needed to meet the requirements of the economy” (Rizvi, 2013, p. 275). Amongst other things, a human capital view of education makes individuals accountable for their educational circumstances, obscuring any responsibility for structural issues related to capitalism, poverty, and employment (Roberts-Holmes & Moss, 2021). What interests us is the type of knowledges that are associated with neoliberalism and human capital views of education and how these knowledges impact ECE.

Epistemology is the way in which knowledge is acquired and validated, and for Maynard (1994), epistemology is a “philosophical grounding for deciding what kinds of knowledge are possible” (p. 10). Policy makers, educators, and researchers often draw on different types of knowledge, depending on the purpose for which the knowledge is used. But it is rare that the philosophical foundations of knowledge are considered by users and consumers, which makes it imperative that we attend to the “forms of knowledge that are generated, how, why, where, and by whom” (Bang & Vossoughi, 2016,

p. 174). Here we grapple with how some of the different knowledges that exist in ECE in Australia might come together in new and equitable ways for the benefit of children and families. But equity is a problematic concept as it too has been redefined in market terms (Rizvi, 2013). Equity is now about "student access to educational markets and their preparation to participate in economic markets" (p. 275). Equal treatment of individuals has been "sidelined" (Rizvi, 2013, p. 276), with equity now "assumed to be located in the processes of acquisition and production of capital rather than in the need to build social communities based on notions of trust and human dignity" (p. 276).

Method: Dialogic engagement

As a group of four, we adopted a method that was somewhat unusual, mainly because it suited our intent. Our uniting purpose was to investigate the types of knowledges available in ECE, how these are used for daily classroom practice and assessment of children's development; and consider how seemingly irreconcilable knowledge domains might position educators in their daily work. Our explorations occurred through informal meetings and conversations that were undertaken face-to-face and online; in email conversations; the creation of a PowerPoint presentation, and a conference presentation where we all presented (online). Some conversations occurred with all authors, and others with different combinations of two or three authors. We documented our discussions using notes from meetings and conversations, email correspondence; and consider the PowerPoint and the transcript from the conference presentation as artefacts (data) that resulted from the discussions. The dialogic engagement that resulted in this Commentary took place over approximately seven months.

The overriding principle of the conversations was that they were dialogic engagements. By dialogic engagement, we mean an ethical communication process that enables deliberation and scrutiny of ideas related to academic matters. Amongst others, Friere (1970) and Habermas (1984) saw dialogue as a communicative process and a way of interacting. Dialogue of this nature is informed by dialogic theory, which has many concepts that are closely connected and interrelated (Kent & Taylor, 2021). There are also similarities between dialogic engagement and documented aspects of feminist reading groups in universities (e.g., McLauchlan, 2018) where the emphasis is "lively, trusting, intellectual connection [that] encourages vibrant thinking, a greater sense of resilience, and potentially, an inclusion of [more] diverse voices in academia" (McLauchlan, 2018, p. 86). In their earlier work Kent and Taylor (2002) focused on a dialogic theory of public relations, and here we draw on five aspects of their work that were relevant to our purposes of dialogic engagement: mutuality, empathy, trust, risk, and commitment, in the hope of creating vibrant thinking.

First, mutuality was important for us because it encompasses "inclusion or collaborative orientation" and a "spirit of mutual equality" (Kent & Taylor, 2002, p. 25). With one Biripi (Aboriginal) Australian male service leader and three Anglo-Australian female academics, we needed a space of inclusion, respect, reciprocity, and collaboration; one where power relationships related to gender, Indigeneity, employment, knowledge, experience, and so on mattered. Without mutuality and an understanding of, and respect for the power relationships at play, this Commentary would not have eventuated. Second, empathy required creating a supportive environment where trust was essential if dialogic engagement was to occur. Similarly, acknowledging and affirming the value of what others brought to the conversation was essential for building the third aspect of trust. Prior work between Highfield and Duncan was pivotal in the development of trust amongst the four, as were the previous established relationships between Highfield and

Neilsen-Hewett, and Grieshaber and Highfield. Supportiveness meant facilitating the participation of others while maintaining a communal orientation. Fourth, being part of a dialogue like this meant there were relational risks and that vulnerabilities were exposed. Not all four of us knew each other initially, so while united in a quest to talk about knowledges and ECE, part of the dialogic process involved getting to know others while discussing scholarly matters where opinions differed. So we made ourselves vulnerable by the risks we took in sharing our ideas, values, and beliefs to progress the conversation in the hope of achieving genuine dialogic outcomes (Isaccs, 1999). Finally, commitment is closely connected to risk in that it required us to reveal our positions (e.g., the AEDC is a culturally biased tool; the AEDC does an important job) and not only be "committed to the conversation" (Kent & Taylor, 2002, p. 29) but also committed to work at understanding positions that differed markedly from our own.

As a Commentary piece, this work contains our reflections and life experiences. This includes those of Duncan as an educator and parent. We note this reflection incudes Duncan drawing on experiences with his own child 'Yani'. These reflections are provided with the permission of the parent and in consultation with Yani.

The dialogic outcome

We present the dialogic outcome as a series of excerpts compiled from all data sources. The genre and voice vary and reflect decisions by individual authors. We begin with Neilsen-Hewett talking about the characteristics of the AEDC, which is followed by the voice of Duncan and then some analysis by Grieshaber. The ideas of Highfield are woven into the conceptualisation and writing of the remainder of the article.

Neilsen-Hewett and the AEDC

Our knowledge of children, of their learning, and of their development is informed by a rich tapestry of sources and informants. Objective measures or assessments of children's development are increasingly positioned as reliable and valid sources of data and from a funding and policy perspective hold elevated status in our 'knowledge' of Australian children. The use of population measures such as the AEDC is frequently drawn upon to identify and monitor children's developmental outcomes, to identify intervention needs or as a measure of intervention success, and to ascertain communities of high vulnerability. The AEDC currently relies on teacher report to assess children across five areas of development - physical health and wellbeing, social competence, emotional maturity, language/cognitive skills, communication skills and general knowledge – domains that are deemed foundational for children's later educational attainment, wellbeing, and adjustment (Commonwealth of Australia, 2022).

Despite the value of population level measures like the AEDC, as critical users of data we also need to be thinking deeply about the "what, how, and why" of assessments, whose voice we value and what the data is actually telling us. The answers to these questions speak partially to the fidelity of the measure(s) as well the meaning and value we place on the data and how the data is used. For example, the triannual collection of AEDC data since 2009 shows that on average one in five children across Australia are deemed developmentally vulnerable on one or more developmental domains (Commonwealth of Australia, 2022). The data also tells us that this vulnerability is not equally shared across the population; we know children from Aboriginal and Torres Strait Islander backgrounds, children experiencing socio-economic disadvantage as well as children residing in areas of geographical remoteness are two to three times more likely to exhibit developmental vulnerability. While this variance may be an accurate capture of children's development it raises important considerations around "how" AEDC data is collected. Teachers report on children's development early in the first year of formal schooling (often within the first month) and therefore the objectivity of teacher reporting is conflated with teacher knowledge of the child and the cultural context in which the child is embedded. This is further complicated by items that include underlying subjectivity, for example, teachers are asked to rate "since the start of the year, has the child sometimes (more than once) arrived over or under-dressed for school related activities?" This of course will look different for different teachers across different contexts.

The AEDC data is frequently drawn upon to inform educators, researchers, and policy makers about children's adjustment. At a population level the data could potentially be positioned as a measure of government or educational effectiveness. This becomes the "what" of the AEDC. Rather than simply positioning the child as not meeting minimum milestones or experiencing physical vulnerability, the question becomes more about the system in which the child is embedded: *How have our systems failed children so deeply that a parent is unable to feed or dress their child in the morning before they come to school?* In this way we might reposition the AEDC as a report card on how well Australia is tracking as a society in preparing our children for life.

The final consideration around population-level data sits with utilisation – the "why". One challenge of the AEDC is that it doesn't have immediate utility for the teachers collecting the data or for people working directly with the child. While we can use AEDC data as a reflection or 'capture' of how children are tracking, it is not designed to support or shift individual child trajectories. In raising these limitations, it is not our intention to diminish the value of widespread measures of children's development – they provide a valuable role in helping to identify children and communities experiencing vulnerability and how best to support children. However, if assessments are to be educationally and developmentally impactful, they need to yield meaningful information about individual children, they need to sit within a broader and more socially and culturally inclusive assessment framework, they need to be actionable, and they need to underpin practice through the provision of professional learning and evidence translation. This demands (irrespective of the source of data) that we hold children at the centre of our decision making.

Service leader Duncan

Figure 1 is a visual image of an artwork of mine that speaks not only to the numerous perspectives that we have, but speaks to how we've come together in the dialogue and how we are having it; it also fits rather conveniently into the structure of what I am going to share. As a Biripi man and a service leader, my practice focusses on positioning Aboriginal and Torres Strait Islander knowledges as crucial to Australian children's development; draws on child-focused pedagogies; incorporates both community-building and cultural tradition; and engages with contemporary socio-political discourse and activism in the areas of social justice and anti-bias curricula. This perspective on knowledge contrasts with the AEDC's summative tracking of development, which is used as a source of knowledge of children's developmental progress (and lack of).

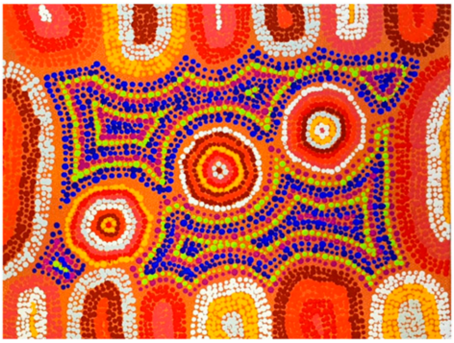

Figure 1. Duncan's original artwork showing numerous perspectives.

In relation to what Cathrine (Neilsen-Hewett) has said about the collection of data, I describe it as the reduction of children to points of data within a population measure, and I want to paint a picture of a child to you as an educator. This child's name is Yani, and she is an Aboriginal girl. I began teaching her at age two when she started at the service I work at, and it became immediately clear that she bucked the trend that the (AEDC) data suggests. So many datasets speak about Aboriginal and Torres Strait Islander children in an Australian context as struggling, but she was achieving incredibly well academically. Very early she was quite interested in emergent literacy and emergent numeracy activities. She comes from a very well-educated family background and both of her parents have Bachelor degrees, as do her paternal grandparents. Her paternal grandparents are where she gets her Aboriginality. She presents a picture of a unique child when we look at data in that population measure of what to expect, and the tendency for Aboriginal and Torres Strait Islander children to be two to three times more likely to be vulnerable in one or more of the AEDC domains: she really bucks that trend. The question that was raised for me was how her positioning fits within the population measure and how she has been reduced to a point of data. She becomes a de-identified Aboriginal student who doesn't fit the trend. How exactly does her positioning - with all the context removed (on the AEDC) – affect her and how might it affect her ongoing academic career going forward? I don't have an answer for this, but it was a big thing for me: how does her positioning in the data affect her as a student, her relationships with her peers and teachers in the future?

Plot twist – Yani is my child – and once I talked this out with the team (at the service) and positioned this as a teacher, I had a second level of questioning as a parent. Combining these roles, I started to wonder exactly how her positioning in a deidentified population measure impacts her sense of self. As a parent that is so important to me - I'm sure all parents want their child to develop a strong sense of identity and confidence in themselves - I am speaking as an Aboriginal person who went through mainstream schooling my whole life and know that we have deidentified data and systems in place to make sure that children's identities are safe within these data. Peers and her teachers know that aspect of her identity because she is identified as an Aboriginal person. And I hope that her positioning within these systems does not lead her down a road of questioning her identity and does not put her at some sort of disadvantage. My worry is that without a focus on supporting individual children within this big group that we are measuring, and measuring subjectively: how do we make sure that each individual is not in any way disadvantaged by their positioning within those data sets? I pose the question that there is potential for that, and that is a big concern for me. Then finally, thinking as an Aboriginal person, how exactly does this positioning, this reduction to a point of data in a larger set impact the potential of her becoming a strong community and cultural leader given my perceived potential for her to be impacted by negative statistical trends and her feelings of where she sits in that.

A concrete example of that, and I'll pull away from Yani at the moment, and come from my experience. As a student I really struggled because during my schooling, I wasn't included in a lot of the systems that were put into place at the time to support Aboriginal students, and that made it incredibly hard for me to maintain a relationship or connection with the Aboriginal community in which I lived. I was othered. I was othered by my mob and I was othered by other Aboriginal people living around me because I was bucking the trend. We could argue that it was just an experiential situation: I was seen as too white. I wasn't like the other black kids. And I worry for Yani that she will be in a similar situation to me and that she will be painted a particular way because of who she is. The systems need to do a better job of taking into account the contexts and the individuals; and my big question is how do we do that? I'm hoping that through this dialogue we can kind of get our heads around what that might look like.

Grieshaber: Equity and fidelity of instruments

Fidelity is about who is measuring what and how that measuring is being undertaken. Within this context, fidelity speaks to the degree to which items on the AEDC are undertaken and completed (by teachers) as intended. While teachers are given brief training to support data collection, we have limited understanding of how teachers complete the items in accordance with the training. Given the inherent variance across the teaching profession - individual differences in views about approaches to learning and teaching, teaching experience, values, and beliefs; the contexts where teachers are located, and the specific settings where they work, we are likely to see this translate to variation in how teachers complete the items. Teachers can work in remote, rural, urban, or regional areas with children and families who are living in a variety of socio-economic circumstances and have a range of heritages and histories that include Indigenous, migrant, refugee, culturally and linguistically diverse, and Anglo Australian. One of the items on the AEDC teachers complete is "How would you rate this child's ability to tell a story?". There are five options that range from poor or very poor; average, good to very good; unknown, or not applicable. Considering the contextual factors that might impact teacher decisions is important, as some of the teachers completing the instrument will have only known the children for one month. Accordingly, there seems to be a lack of information about the fidelity, i.e., the degree to which the measures were undertaken and completed as intended.

Reliability and validity are connected to each other and to fidelity in complex ways. Reliability relates to using an instrument that produces scores that are stable and consistent each time it is used by the varied range of people completing it (Creswell, 2012). The AEDC instrument needs to be reliable given the challenge of producing consistent results. It also needs to be reliable because of the way it is used to justify models of research funding that are based on deficits, or children not meeting the required norms. Teachers from across Australia rate children in vastly different contexts, with diverse individual characteristics, and are likely to have different beliefs or values about what makes a good story. In 2021, over 17,500 teachers completed the AEDC (Commonwealth of Australia, 2022), reporting on around 100 items, which means there is a lot of scope for variance in teacher reporting. If scores are not reliable, they are not valid. Validity then, is "the degree to which all the evidence points to the intended interpretation of test scores for the proposed purpose" (Creswell, 2012, p. 159). In short, validity is about selecting instruments that will measure what was intended, and the consequences of using the scores derived from an instrument. The AEDC data is often used to illustrate deficits in the population rather than strengths. For instance, there is no capture of those who could be 'exceeding expectations' i.e., achieving beyond being categorised as developmentally 'on track' in all five domains. Use of the results tends to be skewed toward identifying populations that are developmentally vulnerable and researchers use this information as the rationale and justification for research grant applications.

Engaging in equity-oriented research and moving beyond defining children in deficit terms means broadening what counts as research. There are several points that are relevant here, but we make two. First, when designing any research that aims to treat participants equitably, using a range of theoretical lenses (e.g., colonial, racialised), structural critiques, and theories of transformative social change is imperative. This goes hand in hand with articulating the epistemological (type of knowledge), ontological (related to the nature of being), axiological (values), historical, and relational perspectives underpinning the research. While it may be more common in some disciplines to reject deficit-based discourses that are associated with nondominant peoples as explanations for difference (Bang & Vossoughi, 2016), this is yet to be realised in ECE; as is the way in which deficit-based discourses reify normativity (the AEDC results are a powerful example). Second, at stake here is the scarcity of epistemological heterogeneity i.e., the lack different types of knowledge, due to the limited ways in which research is often conceptualised and enacted. Examples include positivist approaches that collect data objectively using quantitative measures and claim that results are applicable universally. Equity work means expanding the type of knowledge (epistemology) that is used in research repertoires (Bang & Vossoughi, 2016) and avoiding research designs that make historically underrepresented peoples 'fit' into existing normative forms (Richardson, 2011). Where this occurs, equity is disguised as compliance with inequitable systems that focus on "increasing nondominant students' mastery of dominant forms" (Bang & Vossoughi, 2016, p. 175), which is precisely what the AEDC aims to do by identifying developmental vulnerability, as does the frequent use of vulnerability data by researchers to devise intervention 'needs' or determine intervention 'successes'. Repackaging and reproducing inequities under the guise of equity and social justice often maintains existing structures and systems that perpetuate the very inequities that they claim to address. Research designs that are informed by critical theories, involve participant and community co-design, and explain the epistemological, ontological, axiological, historical, and relational perspectives underpinning the research are more likely to foster relationships with communities that are "based on notions of trust and human dignity" (Rizvi, 2013, p. 276).

Beyond the AEDC

The Alice Springs (Mparntwe) Agreement (Education Council, 2019) indicates the Australian education system supports "Aboriginal and Torres Strait Islander identities and provide[s] safe learning environments" (p. 16) so that Aboriginal and Torres Strait Islander learners can reach their potential. In addition, the Agreement (Mparntwe) (Education Council, 2019) makes significant statements about the importance of building on "local, regional and national cultural knowledge and experience of Aboriginal and Torres Strait Islander peoples and work[ing] in partnership with local communities" (p. 5). This encompasses making early childhood settings culturally safe, especially for educators who work with Aboriginal and Torres Strait Islander children, young people, and families (Fox et al., 2015). Culturally safe spaces include amongst other things, addressing matters related to racism and discrimination, embedding Aboriginal and Torres Strait Islander perspectives in the curriculum, and ensuring that programs are responsive to family circumstances and locations (Gerlach et al., 2017). Responsibilities of educators are clearly defined here; however, these responsibilities are yet to appear in standardised assessments, and the management of data collection and data reduction; as are culturally responsive teaching approaches that focus on teaching to and through the cultural and individual strengths of learners (Gay, 2000). According to Māori scholar Hindle and colleagues (2017), developing meaningful relationships with Indigenous families necessitates a "shift from epistemology (knowing about) to ontology (knowing through)…[by] taking an embodied approach to creating relationships" (p. 92). Educators require significant support to move to a *knowing through* ontology.

Our discussions were about how data from standardised instruments might inform policy, but equitably. The ideas presented reflect very different understandings about knowledge, how it is valued, used, and the purpose for which it is used in ECE. Repositioning the AEDC as a report card on how well Australia is tracking as a society and preparing children for life may be closer to more equitable approaches if system failures and structures in society are addressed, rather than focusing on individual assessments that are converted to community deficits. Yet the measure itself retains inherent biases, which are reflected in the data gathered since 2009. It is based on specific child development knowledge that is valued by dominant groups in society and omits knowledge such as cultural safety and that learned by teaching to and through the cultural and individual strengths of learners (Gay, 2000), thus continually constructing specific groups of children as developmentally lacking. These omissions and others (see above) threaten children's sense of belonging, yet according to *Belonging, being & becoming: The early years learning framework for Australia V2.0* (EYLF V2.0), "Experiencing belonging – knowing where and with whom you belong – is integral to human existence" (Australian Government (AG) Department of Education for the Ministerial Council, 2022, p. 6). Belonging is also essential for being and becoming because "it shapes who children are and who they can become" (AG, 2022, p. 6). The Agreement (Mparntwe) (Education Council, 2019) makes explicit reference to building on cultural knowledges and experiences, and partnerships with local communities. Therefore, developmental norms that ignore children's strengths such as cultural knowledges and experiences, and position children as deficient need to be removed or significantly revised so that information gathered may have a chance to locate all children and their strengths in the context of their families and communities, and as central to decision making. Hopefully this would also contribute to halting the industry of deficit-based research founded on the AEDC outcomes.

The value of children's voices and the role of assessment have been elevated in the EYLF V2.0 (AG, 2022) but including children's voices in assessment tools such as the AEDC will not change the developmental norms against which progress is compared. While significant differences remain between the AEDC and approaches to assessment in the EYLF 2.0, there remains a pressing need to develop measures that not only provide an accurate assessment of children's developmental trajectories but also produce information that is actionable, culturally sensitive, and empowers educators to create differentiated and responsive pedagogical decisions that are in the best interests of children. Whether this can be achieved within a single measure is highly unlikely and therefore reinforces the need for a kaleidoscope of approaches to ensure both equity and relevance.

The distance between the knowledges valued by Duncan (and many others) and what the AEDC represents can be reduced when measures are created with equity at the forefront. But equity-oriented work requires a commitment to theories of change, and as Hindle et al. (2017) have noted, a different ontological perspective is needed rather than continuing to measure and report what children are unable to do compared with developmental norms. Subjecting instruments used with young children to scrutiny regarding historical, relational, and axiological (values) perspectives (Bang & Vossoughi, 2016) is a step toward moving beyond measures where data reporting deficits is used to justify research that attempts to remedy developmental shortcomings. Deficit approaches conceal particular practices such as nonnormative and non-linear ways of knowing, being, and doing, while theories of change and ontological dispositions such as *knowing through* (Hindle et al., 2017), open alternatives that are nonnormative and highly likely to be known and valued in non-dominant, and especially Indigenous communities.

Our final observation relates to the idea of broken data, which is a metaphor for understanding how digital data is "experienced, used and mobilised" (Pink et al., 2018, p. 11).

Pink et al. discuss learning about data breakage, repair, and growth through investigating everyday "data worlds". Of the three examples shared by the authors, that of data analytics is relevant to the AEDC data, because data can be broken while being produced and then potentially broken again using processes such as "the techniques of cleaning, and processing required before being used for analysis" (p. 11). We have previously indicated the inherent variance across the teaching profession and the challenges associated with reliability of the measure because of variation in how and when teachers complete the items on the AEDC. Variance includes how data are gathered (teacher reports) and the subjectivity of teacher reporting (e.g., individual differences in teacher views about approaches to learning and teaching, teaching experience, values, beliefs etc.). These are examples of the potential to disrupt or break the reliability of the measure during the data collection process. Further opportunities occur for breakage as part of the cleaning process, which is an investigative process required with measures such as the AEDC. Processes such as how data cleaning occurred are not always apparent in explanations of data analysis. Explanations of repair are more common, with information often provided for how missing data was handled (e.g., how lack of response to one or more items on a survey questionnaire was addressed). Missing data can also be seen as data breakage. Pink et al. present an account of how breakage, repair, and growth is a way to learn about "everyday data worlds and to account for how these disrupt and break the linear, solutionist, and triumphant stories of Big Data" (p. 11). They highlight three points for future research. First, the importance of recognising when data is broken, and the implications of breakages for working with data and how meaning is generated. Second, they indicate that because processes of "repair and maintenance…are part of the way data is produced, analysed and used" (p. 11), they should be acknowledged by researchers. Their third point is that data needs to be nurtured so that it can "grow in transparent and ethical ways that are beneficial to all stakeholders" (p. 11). Being beneficial to all stakeholders means holding equity as a key principle in any approach to research.

Conclusion

Neoliberalism, which encompasses human capitalism, makes individuals accountable for their educational circumstances and dismisses structural matters and subsequent effects on individuals. One of the aims of this Commentary is to enhance understandings of how different knowledge is valued, what it means, and how different types of knowledge position educators. The daily challenges of working with different types of knowledge and the hierarchical ways in which different knowledges are valued are reflected in trends that emphasise monitoring and testing, and increased standardisation in Australian ECE (e.g., transition statements, quality rating improvement systems). The commitments in the Alice Springs (Mparntwe) Agreement (Education Council, 2019) remain absent from standardised data collection and data-based governance approaches. The AEDC retains inherent biases. It is unable to capture more tangible and complex aspects of knowledges using standardised instruments, and the underlying epistemological, axiological, and ontological perspectives are irreconcilable with principles of equitable research design. Until these commitments are addressed, educators will continue to produce the required documentation, which, because it does not recognise nondominant knowledges, will perpetuate inequitable systems that focus on increasing nondominant students' mastery of dominant forms of knowledge.

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