Democracy and education in contemporary local-global contexts

Stewart Riddle
University of Southern Queensland, Australia: *stewart.riddle@usq.edu.au*

This special issue takes up the call of the 2017 Re-imagining Education for Democracy Summit *to seek new ways to resist growing educational inequality and reframe educational policy and practice to better meet the diverse needs of communities. In a time of enormous challenges and complexity, where "thick" democracy is reduced to "thin" choice in markets, collective action and resistance is reconstituted as individual competition and civic virtue is measured by "likes" or clicks on social media, it becomes vital that educators and researchers find ways to speak back and resist the de-democratization of education across the world. In this issue, contributing papers provide a range of local and global perspectives on the problem of democracy in education, across multiple contexts, including schools, universities, and informal and non-traditional learning sites. Added to this are a range of international empirical research evidence from Australia, Brazil, Taiwan, Thailand, UK, and US, providing rich comparisons between systems, nation-states, and diverse communities. Each paper considers the question of how we might address the issue of democracy and education, applying a range of methodological, conceptual, and empirical tools to specific local-global education concerns. Taken together, they provide international and comparative perspectives on the different ways education might be re-imagined for democracy.*

Keywords: democratic education; democracy; inequality; social justice

There is no doubt that democracy is in a profound state of crisis around the globe. The rise of authoritarianism seems to continue unchecked in all quarters, as seen in the advent of fascist and populist demagogues such as Russia's Vladimir Putin, the US's Donald Trump, Brazil's Jair Bolsanaro, Turkey's Recep Tayyip Erdoğan, Venezuela's Nicolás Maduro and, of course, North Korea's Kim Jong-un. If the 20th Century can be understood as a time of significant global democratic progress—from women's suffrage to the breakdown of the British Empire, postcolonial independence movements, and the enshrining of liberal democracy as the standard for political governance—then perhaps the 21st Century will be remembered for the unravelling of global democracy. While it might seem like hyperbole to make such a claim, the strain on democracy is clearly evident in many ways. For example, it can be seen in the inertia of elected political leaders to address catastrophic climate change, the building of border walls and tough anti-immigration talk on national security, the revival of old tensions between Russia and the US, the flexing of Chinese economic and military power in the Indo-Pacific, the crippling

paralysis of Brexit, and the continued global funnelling of wealth and power to a few by corporate and political elites.

I recently came across news reports of Swedish 16-year-old climate activist, Greta Thunberg, who rose to prominence with a blistering speech to world leaders at the United Nations COP24 Conference, in which she declared:

> We can't save the world by playing by the rules. Because the rules have to be changed. So we have not come here to beg the world leaders to care for our future. They have ignored us in the past and they will ignore us again. We have come here to let them know that change is coming whether they like it or not. The people will rise to the challenge. And since our leaders are behaving like children, we will have to take the responsibility they should have taken long ago (Thunberg, 2018).

The backlash from neoconservatives, alt-right activists, and corporate-owned media interests has been loud and vitriolic. Yet Thunberg is right: the rules have to be changed. We are staring at a nightmare scenario for our global future, which includes runaway climate change, mass extinctions, environmental degradation, and loss of biodiversity while simultaneously entering a time of catastrophic social decay, where the five richest people in the world share more wealth than the poorest 80%. Human displacement due to war, famine, and lack of water is unprecedented while nation-states around the world close their eyes and borders to the miserable suffering of millions of refugees. The rise and rise of neo-fascism in places where such things would have been unthinkable less than a generation ago gives further cause for alarm. The US has Trump, while we here in Australia have our own disgraceful bipartisan torture and indefinite detention of asylum seekers who came to us fleeing from persecution and asking for protection.

Of course, within the broader global breakdown of liberal democratic economic, social and political institutions and practices, there are some hopeful localized examples of how people are reconfiguring democratic power through collective acts of resistance and protest against rising social, political, and economic inequality. The Arab Spring, Occupy Movement, Hong Kong Umbrella Movement, and the Children's Climate Strikes are well-known examples of democratic movements. While there are some important lessons and hope to be gained from these collective uprisings, it seems that, for now at least, the corporate oligarchs and self-serving political elites continue to maintain their anti-democratic grip on policy-making and social reform. Perhaps some of the most perverse instances of education reform can be found in the world of corporate philanthropy, with notable examples including Pearson, Bridge Academy, and the Bill and Melinda Gates Foundation. These organisations see education as a commodity, much like any other widget to be packed and sold to consumers, providing for-profit education corporate solutions to much of the developing world. Democracy, or at least a thin version of something resembling democracy, is also sold to consumers through the mantra of choice, which is a dangerous illusion for all but the wealthiest families in the developed world.

Within this broader social, political and economic context lies our education systems: early childhood, formal schooling, and university and technical education alongside other forms of learning and teaching in different contexts. One of the key challenges facing educators is how to resist anti-democratic forces in education and come to some understanding of "what the potential role of education might be in equipping young people with the tools and knowledge to become powerful democratic agents of change in an increasingly unstable and dangerous world" (Riddle & Heffernan, 2018, p. 319). Given the state of the environment and collapsing political and economic systems, it seems clear

that we are at a moment of great importance. Continuing as we are in terms of such concerns as mitigating runaway climate change, tackling extreme social and economic inequality, and halting the erosion of our democratic institutions is not going to work. More radical activist efforts are required, including those of scholars and educators who work with young people on issues of local and global relevance. Education is at the heart of our efforts to reconfigure the social apparatus in more equitable and socially just ways, for both the sustainability of our communities and the planet. In short, the question we might ask ourselves is: given that things are in a bad way, what should be the response of education to work towards addressing these complex local-global crises? It is the proposition of this special issue that education should form a central part of our collective will to re-imagine our political, social, and economic systems and institutions in more sustainable ways. Part of this project requires re-imagining education for democracy.

However, any actions on the part of educators to re-imagine education for democracy is going to be met with resistance from parties who have a vested interest in maintaining the status quo. For example, one response of governments and education policy-makers in many places has been to double down on reductive and technicist modes of school governance, curriculum, and pedagogy, giving rise to further intrusions on the professional autonomy of teachers and the rights of young people to demand access to socially inclusive and supportive education opportunities. Regressive education "reforms" limit the freedoms of teachers to teach and students to learn, and, instead, promote education as a competitive enterprise that positions learners as entrepreneurial innovators within education markets, who must seek to maximize their competitive advantage and outcomes.

In his work on curriculum and education reform, Apple (2006, 2014) traces the history of neoliberal and neoconservative policies on schooling in the context of the US; his analysis resonates with many "developed" countries that have shared similar reform agendas. Take, for example, the rise of Academy schools in England, Free schools in Sweden, and the highly segregated schooling landscape in Australia (Bonnor & Shepherd, 206). Education, and schooling, in particular, has been successfully reconfigured from a public good into a private commodity, with profound consequences for teaching and learning. There is little room for democratic values and practices in school when the livelihoods of teachers depend on student achievement on standardized tests and the successful output of entrepreneurial global workers ready for the market.

This special issue takes up the call of the 2017 *Re-imagining Education for Democracy Summit*, to seek new ways to resist growing educational inequality and reframe educational policy and practice to better meet the diverse needs of communities. In a time of enormous challenges and complexity, where "thick" democracy is reduced to "thin" choice in markets (Apple, 2018), collective action and resistance is reconstituted as individual competition, and civic virtue is measured by "likes" or "clicks" on social media, it becomes vital that educators and researchers find ways to speak back and resist the de-democratization of education across the world.

In this issue, contributing papers provide a range of local and global perspectives on the problem of democracy in education across multiple contexts, including schools, universities, and informal and non-traditional learning sites. Added to these perspectives are a range of international empirical research evidence from Australia, Brazil, Taiwan, Thailand, UK, and the US, providing rich comparisons between systems, nation-states, and diverse communities. Each paper addresses the question of how we might approach

the issue of democracy and education, applying a range of methodological, conceptual and empirical tools to specific local-global education concerns. Taken together, the papers provide international and comparative perspectives on the different ways that education might be re-imagined for democracy.

In their paper, Bunn and Lumb reconceptualize the notion of agency in education, drawing on Barad's agentic realism. They consider how current formations of schooling and students produces undemocratic and hyper-individualistic forms of agency, suggesting that a careful rethinking of the ontologies of being in relation to education might produce something more akin to a realized democratic agency. In doing so, Bunn and Lumb argue that we need to think more in terms of the relational agencies of classrooms and other education encounters rather than view education through the lens of the autonomous individual subject.

Hardy, Reyes, and Hamid provide a compelling case for contesting instrumental and technicist approaches to teachers' work, replacing performative accountabilities with more authentic accountabilities. In presenting the empirical work on teachers in Queensland, Australia, they argue that teachers struggle to fully attend to their students' learning needs when they are beholden to a system that relies on contradictory practices and policies, emphasizing inputs-outputs, and standardized metrics. Hardy, Reyes, and Hamid suggest that teachers are not simply beholden to performative logics, because they can critique and exert agency in their professional practice.

In their paper, Cássio, Goulart, and Ximenes present a case study on the Rede Escola Pública e Universidade, a network of public Brazillian schools and universities in São Paulo that engages in radical acts of collective resistance to anti-democratic movements and counter the politics of injustice. They detail the relationship between knowledge production in schools and universities and the potential to generate democratic agency and mobilize for political action in the struggle for public education. Given the current political climate in Brazil, with the recent election of far-right president, Jair Bolsanaro, the work of scholars, including Cássio, Goulart, and Ximenes, is significant.

Djone and Suryani examine the issue of child workers in Indonesia and the harmful effects that child labour has on their access to education. Their project considers how teachers' perceptions of child workers in their classrooms influence their teaching choices, illuminating the lack of resources and capacity to deliver high-quality learning outcomes for child workers who come from disenfranchised backgrounds. Djone and Suryani propose a set of principles for engaging in more inclusive and democratic education practices in the classroom with child workers.

Udas and Stagg consider the ideological apparatus of the enterprise university, using the instrumentalist theory of state to examine how contemporary university systems in places like Australia, the UK, and US have become an ideological extension and auxiliary agent of the corporatized state. They argue that instrumental theory helps to explain why universities have seemed to willingly embrace neoliberal and managerial behaviours, rather than critically responding to them. Udas and Stagg suggest that the role of universities as spaces for democratic discourse and civic engagement is diminishing as they become increasingly bound up in legitimizing and reproducing the state apparatus.

In her paper, Li presents a detailed historical and contemporary account of Taiwanese culture, identity, and its path towards a national curriculum and the rise of student

movements. She examines the coercive effects of the national curriculum and official knowledge on representations of national community and identity. Li utilizes the conceptual tool of imagined communities to call for a more democratic, inclusive, and multicultural curriculum that is negotiated with and responds to the contextual needs of young people living in Taiwan that also provides them with the tools to critique the powerful dominance of official knowledge.

Writing from the Brazilian context, Travitzki and Kelian consider open architecture curriculum as an expression of democratic pluralism. They argue that open architecture provides pro-democratic possibilities for curriculum planning and delivery because it is a method of organizing real and virtual collaborative actions and concepts through heterogeneity transparency, flexibility, and intelligibility. Travitzki and Kelian go to some pains to examine the conceptual apparatus of open architectures and possible implications for more socially just, inclusive, and democratic curriculum and pedagogy.

In his paper, Duggan explores how the motif of digital disruption has been taken up by democratically elected leaders to influence political and policy action in response to globalized digital economies. In particular, he considers the case of coding in Australian schools, which gained significant policy attention as part of a discourse on 21st Century skills and literacies of the future. Duggan examines some of the contradictions and hidden costs of such future-oriented policy-making and politicking, suggesting that there are consequences for educational equity, access and participation.

Laing, Mazzoli Smith, and Todd round off this special issue, with their paper on relational justice and the conceptual exploration of dialogic fairness. They consider how a range of UK-based Fairness Commissions have attempted to grapple with reducing educational inequality while increasing access to educational opportunities and embedding democratic principles into education. Laing, Mazzoli Smith, and Todd propose a framework containing several principles of fairness in education, which they suggest might assist teachers, school leaders, and policy-makers to address significant educational inequality.

Taken as a collective, the papers presented in this special issue provide a compelling argument for the plurality of possibilities when it comes to imagining more democratic ways of living and learning in contemporary contexts. Authors write from multiple perspectives—theoretically, methodologically, empirically, geographically, and so on— yet, there is a sense of a shared commitment to the notion of an education that is for democracy. By this, I mean the daily practices of learners, educators, leaders, communities, and societies towards a collective wellbeing and increased civic participation.

Each paper in this issue presents a specific contextual issue relating to education in which collective action and struggles to embed democratic practices into the daily lives of educators and learners is paramount. These local examples of committing to education as a practice of freedom (Freire, 1972) provide important lessons for re-imagining education, which might be taken up by educators, policy-makers, and researchers in different contexts. There is a shared demand for more relational and authentic forms of accountability that reconstruct the current modes of reductive and technicist accountabilities in education. There is also a clear need to better understand the complexities of young people's lives and account for those who face multiple factors of deprivation and disenfranchisement.

Demanding more democratic modes of civic participation will not be an easy project, as has been demonstrated by the efforts of teachers, students, their families, and others who have engaged in collective acts of resistance. However, there is an urgent need to both resist authoritarian educational reforms that seek to minimize the freedoms of teachers and students while also finding new expressions of hopeful education in both local and global communities. There is no doubt that we require a radical re-imagining of education for democracy. And the time to start is now.

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Education as Agency: Challenging educational individualization through alternative accounts of the agentic

Matthew Bunn
University of Newcastle, Australia: *matthew.bunn@newcastle.edu.au*
Matt Lumb
University of Newcastle, Australia: *matt.lumb@newcastle.edu.au*

In this paper, we problematize current conceptualizations of agency in education. We begin by considering how the construction of the hyper-individual, one that is entirely determined by its own internal capacities, has become the norm within Australian educational policy. We propose that this conceptualization produces undemocratic educational possibilities built on assumptions that individuals have the capacity to rationally choose pathways that will maximize their own interests, ignoring the contextually bound ways in which this produces, makes durable, and reproduces trajectories of disadvantage and advantage within the educational system. We experiment with how education could be understood if the ontological assumption of the individual was unsettled, with a focus shifting to relations rather than intrinsic entities. To do this, we draw from the New Materialist literature and Karen Barad's agential realism to suggest that the assignment of "interactive" agency between fully interiorized individuals, especially through competitive logics, confuses the basis and possibility of democratic action. We consider how educative spaces are the enactments and realization of knowledge and, thus, how an enactment of education is not reducible to separate or separable individuals.

Keywords: university; theory of the state; instrumentalism; corporate liberal democracy; advanced capitalism; corporate ideal; common good; private good; academic capitalism; ideological state apparatus; academic freedom; corporatization

INTRODUCTION

Over recent decades, there has been a deepening preoccupation with the individual in Australian educational policy, establishing a system in which neoliberal individualization of responsibility for the personal biography requires that more people adopt a particular form of aspiration, self-responsibility, and risk calculation (e.g. Gershon 2011; Skeggs 2004a). As Riddle (2007) notes, a neoliberalization of educational systems has occurred in the US, UK, and Australia "on the premise of surveillance, competition, ranking and classification . . . (as) . . . market measures, discourses of 'Choice' and individual merit permeate the narratives that are paraded in policy" (Riddle, 2017, p. 3). Neoliberal policy has impacted on education systems globally, albeit to different degrees and in context-dependent ways. The reification of the individual has deeply influenced educational

theory and philosophy, including efforts presented as seeking more socially just educational outcomes and/or democratic educational structures and practices. As Biesta (2007) highlights, questions of education have always been intertwined with questions of democracy, and there has been a longstanding inclination in educational theory and practice to frame the objective of education as being about producing a subject with certain (rational) qualities for participation in society. This has, as Biesta (2007) argues, "deeply influenced the theory and practice of democratic education and has led . . . to an approach that is both instrumentalistic and individualistic" (p. 15).

With each new call to rethink education, with the focus commonly being on schooling within a broader notion of education, the individual is given greater prominence. Against the backdrop of a shift towards "universal" higher educational participation (Trow, 1973) to service a "knowledge economy", or "cognitive capitalism" (Olssen & Peters, 2005; Peters & Bulut, 2011) it is increasingly suggested by neoliberal proponents that many of the modernist/bureaucratic approaches to schooling are failing students because of a lack of preparation for the precarious, fluid, and flexible character of work (for example, see Foundation for Young Australians, 2017). In these conditions, in which new economies emerge and struggles grow over the role that education systems will play in the maintenance of these economies, education is being redefined. Left unarticulated here is the telos of education. "Education is a teleological practice" (Biesta, 2010, p. 500), always framed by an aim or purpose, as values constitute educational practices in largely hidden ways. In this context, neat definitions of what a student is and how they are "entangled" in the world mislead us into narrow representations and recitations.

In this paper, we consider the current neoliberal context and the imperative this constructs for deepening the individualization of education. We argue that the shifting basis of the Australian economy, with an increased emphasis on employability and entrepreneurship, requires a strong focus on student engagement and aspiration within education systems that represents a hegemonic internalization of the values of self that correspond with economic value. We contend that democratic education becomes more unlikely when the individual is reified and positioned as being in competition to maximize their own position at the expense of others. When the policy-making imagination is constrained so heavily by the agentic, socially mobile, competitor-entrepreneur, the possibility of either education for or through democracy becomes highly implausible. In terms of addressing the key theme of this special issue in relation to democracy and education, and how we might "resist growing educational inequality and reframe educational policy and practice to better meet the diverse needs of communities" (Riddle, 2019), the implications of this increasingly close association between, for example, industry and education, is clear. The telos of education is in danger of co-option by business interests and values—threatening the possibility of achieving either education for democracy or education through democracy (Biesta, 2007).

We propose that a productive means of counteracting this approach is to draw from philosophies that offer a radical vision of the basis of agency. To do so, we draw from Barad's (2007) "agential realism" to problematize the notion of student as a container of knowledge, aspiration, and engagement. We approach this by considering what agency in education might look like if the ontological assumption underpinning agency shifted from things to relations. If, as Barad (2007) puts it, "the primary ontological units are not 'things' but phenomena—dynamic topological reconfigurings/entanglements/

relationalities/(re)articulations of the world" (p. 141), then we need to consider the ways in which knowing, aspiring, and engaging is always emerging in relation. We argue that a part of the difficulty of working with concepts such as engagement and aspiration in education stems from an ontological problem in the constitution of the individual student and the responsibilization of this actor to perform hegemonic forms of educational engagement and aspiration. Following Barad, we consider phenomena to be the fundamental condition of agency. This perspective allows for analysis of educational agency as "intra-action" within a web of socio-material relations that bond subjects to their realities. In this way, we explore the possibility that agential realism provides an ontological counterpoint for research in education, one that can assist us to break free from an intense preoccupation with the individual, yet one that does not dismiss the subject within educational relations.

Neoliberal imaginaries, as noted earlier, impact differently across physical, temporal, and social contexts. We recognize, however, the existence of a global narrative of neoliberalized individualism and it is this dynamic to which we respond in this paper. Our context of investigation is the Australian education policy landscape, yet we see the value of interrogating this hyper-individualization in different global-local educational contexts. The contribution to comparative perspectives on how we might resist educational inequality stems from a localized policy interrogation and re-theorization in relation to this global policy, funding, and practice narrative. This paper offers a different way of conceptualizing agency, collectivity, and democracy in relation to schooling and, more broadly, education. We begin by considering Australian educational policy that has brought about the strengthening of individualization in Australian education.

THE INDIVIDUAL IN AUSTRALIAN EDUCATIONAL POLICY

Marginson (2004) identifies 1984–1985 as pivotal in the Australian context in relation to a new policy discussion influenced by the approach of the Thatcher government in the UK. These changes manifested in the Dawkins reforms of the late 1980s, building "neoliberal logic into every sector of the education system" (Connell, 2013, p. 104) and essentially attempting to solve problems with market-based "solutions." In earlier models in Australian (and generally Western) social democracies, an intensive manufacturing/industrial focus meant that educational "aspiration" or "engagement" was not necessarily as important in order to secure work. Now, with Australian educational policy directed towards a neoliberalized version of mass higher education (Gale & Tranter, 2011) to support the shift towards the so-called knowledge economy, secondary and vocational education has seen an intensification of interest in retaining historically less "engaged" students. For example, between 1943 and 2010, the minimum school leaving age in most states and territories was either 15 or 16 years. In 2010, the National Youth Participation Requirement, agreed to by the Council of Australian Governments, meant that any student under 17 who wished to leave school had to either be enrolled in a Vocational Education and Training (VET) course, undertaking an apprenticeship, or be working more than 25 hours a week (ACARA, 2010). Increasingly, longer and more intense levels of educational "engagement" have become normalized.

Increasingly at play across the various sectors of the educational system, these logics also work to frame understandings of the purpose of education towards a changing character of work. These shifts move from a focus on employment to "employability", meaning

that learning and re-learning, training and re-training, are becoming necessary and normalized pathways. This brings education into an ever-closer association with economy, as it is considered that "through policies of competition and choice, education will become increasingly more 'productive' and the economy more competitive and successful" (Angus, 2015, p. 399). Driven by waves of reform that critique "industrial" models of education, educational doxa is paired back to a sheer orientation to business and industry. This was given prominence in the recent *Growth Through Achievement* report led by David Gonski (Department of Education and Training, 2018). These points are now regularly recited by Australian politicians, and notably, education ministers. For example, NSW Education Minister Rob Stokes recently recommended to a regional-NSW Business Chamber (Gregory, 2018) that schools needed to be built at the centre of communities so that businesses can "look in and see how they can partner" with educators and students. Calling for a re-integration of schools back into communities, Minister Stokes framed education as a process whereby business's interests are at the heart of the purpose of education:

> The recent Gonski report's recommendations said the idea of business mentoring in schools and relationships between industry and education is critical in achieving education excellence. We need to get away from the Fordist idea of education as some sort of production line. The skillset we need is bigger and the relational engagement as a community needs to be bigger. That has changed the way we design our schools—we need to facilitate that community interaction and joint use facilities that make it spatially attractive for businesses to look into schools and see how they can partner. We then build richer communities where young people are more attuned to what business expects from them and where the opportunities are, and we ourselves can learn what sorts of products young people want and what sort of experiences they're looking for. (Gregory, 2018)

Neoliberal commitments operate across the political landscape in Australia and across all educational sectors. In VET, Skilling Australia for the Future (ALP, 2007) was part of "a succession of policy documents which suggested that Australia's economic prosperity depended upon the productivity of the individual who was imagined to be well trained and highly skilled" (Garrick, 2011). These changes have also meant a repositioning of higher education as part of the turn towards a more highly skilled, entrepreneurial, and "employable" individual. Indeed, the imperative to "innovate" education systems towards the needs of market-based economies is growing. In Australia, Kenway, Bullen, and Robb (2007) identify the era of Brendan Nelson (2001–2006) as federal education minister as one that repositioned Australian universities within the framework of a "knowledge economy" and a "national innovation system". Drawing on Schumpeter (1943), they contend that "innovation" subsumes education to the market, operating as a driver of economic growth via commercialization and the capitalist processes of "creative destruction" (2007). Burke (2016) summarizes the outcomes of these shifts starkly, arguing that "[t]he purpose of HE (higher education) in the utilitarian, neoliberal framework is reduced to enhanced employability, entrepreneurialism and economic competitiveness" (p. 1).

Hence, the broader hegemony of neoliberal policy has created the conditions for education systems to serve a pivotal economic role. Policy technologies govern through emphasizing "that individuals must take responsibility, as lifelong learners and entrepreneurs of the self, to navigate their own achievement of well-being" (Zipin, Sellar,

Brennan, & Gale, 2015, p. 229). Those who become effective managers of self, deemed so through either the achievement, expression, or aspiration of employable/ entrepreneurial traits and ideals of productivity, are valorized. Subsequently, those who become disengaged are blamed for their lack of interest in these pathways, being seen to lack aspiration (Gale & Parker, 2015). Educational engagement, then, takes on a particularly individualized notion of the subject, where, from a policy standpoint, there is a need to invigorate/motivate individuals into taking these pursuits on, where "mainstream invocations of aspiration deficit tend to signify a lack of motivation, in an individualist psychological register" (Zipin et al., 2015, p. 229).

INDIVIDUALIZATION VS RELATIONALITY

In this climate of individualization, dis-engagement from education has taken on an almost pathological interpretation, applied mainly to the most marginalized groups within education. Yet individualized approaches to education have been shown to be empirically ineffective. For example, Burke (2016) highlights how a focus on raising the educational aspirations of people from disadvantaged backgrounds confuses material poverty with a so-called poverty of aspirations. She argues that "[t]here are a number of examples emerging from the UK context where 'aspiration-raising' activities have been shown in fact to reinforce rather than overcome cultural and socioeconomic divisions and inequalities" (Burke, 2016, p. 3). Similar approaches have been taken within the Australian context, having predictable results (Gale & Parker, 2015; Sellar, 2013). It seems prudent, then, to attempt to "understand why, whatever the advocates of choice might believe, the mere provision of new choices to individual families is unlikely to overcome deep-rooted patterns of structural and cultural disadvantage" (Whitty, 2002, p. 12). Yet, even though research continually demonstrates that these approaches to education are failing, individualized and market-based solutions are offered as the best solution.

Neoliberal conceptualizations of the subject have also received sustained sociological criticism. As Skeggs (2004b, p. 139) argues, the "agentic self" is premised on a simplistic access to "choice". Yet, as she explains, "choice is a resource, to which some lack access and which they cannot see as a possibility; it is not within their field of vision, their plausibility structure" (p. 139). This is continually confirmed through studies exploring the broader patterns of inequality that manifest along class, race, and gender lines. Moreover, social interaction is conceived of as occurring in a "neutral and 'flat' space, where everybody competes from an equal position" (Skeggs, 2004a, p. 63) with equal access to the material means of agency. Skeggs continues:

> This discursive neutralising of capitalism is a highly morally-charged issue, as it shifts our perception from capitalism as a force that generates class inequalities to a flat, neutral and equal space where everybody is free to exchange.

If this discursive space itself is neutral and equal, "success" must, therefore, come via the capacity to "out-perform" others, "always accruing through exchange and investment in order to enhance futures" (Skeggs, 2011, p. 502). This doxic presentation of capitalist "neutrality" does, however, make invisible the relational spatial-material conditions that carry social weight and are crucial for the enactment of certain agencies.

The concealed dimensions of social relations lie within an enduring philosophical commitment to individual interiority and separablility, which has become an effective method of governance. Neoliberal subjectivity adheres to the turns towards individual choice and market logics as a mode of misrecognition and hence the world is experienced and perceived through the systems of governance. Neoliberalism becomes dispositional (Hilgers, 2013, p. 83) with educational actors taking on patterns of self-responsibilization, along with expecting these dispositions from others. Even though actors will regularly perceive the impossibility of successfully adopting schemes of practice that work "in their own best interest," they are, nevertheless, inclined to accept the responsibility for these failings. These often lead to a sense of shame and guilt, experienced even for things well outside the control of actors (for an HE example, see Bunn, Bennett, & Burke, 2018). Neoliberal ideological commitments to hyper-individualism that emphasize the interiority of responsibility, choice, and risk require more than a surface-level means of counteraction. They require a sustained engagement with alternative philosophies that promote democratic engagement regarding the way individuals and their worlds are conceived. We turn, now, to consider the role that the notion of "agency" plays in this process of conception.

INTERROGATING AGENCY

Neoliberal educational policy rests on philosophical presuppositions that sharply distinguish between the fully agentic individual and the agency-less spaces and materials external to them. This philosophical commitment more broadly retains a Cartesian stance that has been subject to intense scrutiny within social theory. As Coole notes (2005), in a broad summary of theories of agency, the agentic self is "already implicitly opposed to the external world, where bodies and material structures are seen as limits or threats to freedom because they are governed by a causality that is antithetical to free, rational agency and ontologically devoid of its qualities" (p. 126). This understanding of the agentic self has been caught in a conceptual difficulty—one relevant to understandings of democracy—that in order for a subject to possess freedom in actions, and consequently take responsibility for freedom and choice, agency must be positioned "within" the interior of rational agents. Even theories that attempt to move away from such a strong focus on individual agency towards intersubjectivity tend towards attributing agentic capacity to the individual in stronger or weaker ways, depending upon their circumstances. As Coole (2005) remarks, these perspectives retain "fairly unreconstructed ontological assumptions about the nature of agency" (p. 126).

There is a fundamental tension between conceptions of a fully interiorized individual operating in neutral space and the attempts to characterize the individual as fully bound within socio-material relations that characterize or constrain the opportunities available to any given social actor. Thus, it is useful to consider ontological approaches that reflect a relational characterization of agentic potentiality that could be drawn into a productive relationship with democratic educational philosophy. While limited for space, we draw from "New Materialism" (Coole & Frost, 2010) and Karen Barad's (2007) philosophy of agential realism to build an interrogation of the irreducibility of agency to the interior of the individual, and to consider ways that the agency of education can be differently conceived to draw more attention to the contextual boundedness of "individual" knowledge.

Key to Barad's argument for agential realism is that the "ontological primitive" has been incorrectly positioned. Western philosophy, following Descartes, has positioned the "thing" or "entity" as being the key, immutable ontological condition. Barad argues against this positioning. She considers that the ontological primitive is not the thing; rather it is the relations themselves that gives us epistemological phenomena. She explains: "because relations constitute the ontological primitives, it makes no sense to talk about independently existing things as somehow behind or constitutive/causal in the production of phenomena. In essence, there are no noumena, only phenomena" (2003, n. 817). The human is, thus, never properly constituted without consideration of its co-constitution within the relations of a phenomenon. This, of course, leaves the problem of agency: how is deliberate conscious action to be understood if it is only ever an expression of a phenomenon? Moreover, what are the consequences for educational practices if the very locus and character of agency is in question? What if agency itself is always co-constituted and enacted and so never fully realizable as a pre-inscribed condition of the individuated agent?

Barad introduces the notion of intra-action to consider how agency arises within phenomenal relations. Put briefly—because phenomena are thoroughly entangled and dependent upon relations as their own ontological basis—action is always an enactment within and through a phenomenon. The notion of absolute separation is made impossible since "phenomena are the ontological inseparability of agentially intra-acting 'components'" (2003, p. 815), where "separations (individuations) become differential movements in the internal and inseparable torsions of Nature itself" (Kirby, 2012, p. 203). Agency, then, needs to be seen as an enactment within a phenomenon rather than originating from an interiority driving an independent will to action:

> Agency is a matter of intra-acting; it is an enactment, not something that someone or something has. Agency cannot be designated as an attribute of "subjects" or "objects" (as they do not pre-exist as such). Agency is not an attribute whatsoever – it is "doing"/"being" in its intra-activity. Agency is the enactment of iterative changes to particular practices through the dynamics of intra-activity. Agency is about the possibilities and accountability entailed in reconfiguring material-discursive apparatuses of bodily production, including the boundary articulations and exclusions that are marked by those practices in the enactment of a causal structure. Particular possibilities for acting exist at every moment, and these changing possibilities entail a responsibility to intervene in the world's becoming, to contest and rework what matters and what is excluded from mattering (Barad, 2003, p. 826–827).

According to Barad, agency is never properly "possessed," subsequently precluding the designation of subjects always already possessing a completely interior potential for agency. Rather than subjectively owned and held, agency is a condition of the varieties of phenomenal constitutions—an enactment that is irreducible to a simple division between subjects or objects. In a sociological sense, the impacts of geographies, of material wealth and deprivation, and the symbolic are constitutive of agentic formations.

AGENCY AS EDUCATION

Although Barad (2007, p. 177–178) extends the possibility of agency much more widely than human subjectivities, more needs to said regarding how, or even whether, subjectivities can be formed and sustained. Numerous authors within New Materialist writings, for example, have stressed the importance of the corporeal/ sensorial/phenomenological character of the body, and its role within agentic formation (e.g., Kirby, 2017; Coole, 2005). Nevertheless, agential realism represents an opportunity to fundamentally reconstruct understandings of educational contexts as a form of resistance to neoliberal individuation. A foundation of this reconstruction is the argument that education is an agentic phenomenon; that it is co-constituted and so needs to be understood as an enactment that cannot be reduced to any single individual, model, or learning space. Knowledge and knowing becomes an "event," rather than an individual possession, and cannot be defined beyond the entanglements that are necessary for its enactment (Hughes & Lury, 2013). Taken further, we argue that education is never reducible to an individual agentic potentiality, as the relations themselves are constitutive of the possibility of agency. Via this lens, students' individual capabilities are viewed not as a construction of inherent qualities but as expressions situated within a greater series of relations that restrict and enact knowing and capability. This allows for a politics around the possibility of the agentic, as the phenomenal possibility of enactment is constrained and/or made possible only through the relations in place.

In other words, rather than giving exclusive epistemological attention to the way in which the individual holds agency, and enacts this agency, a whole host of other relata— including human actors, the character of place, and the material and symbolic attributes of these relations—make this agentic enactment possible. We contend that these can be usefully conceptualized as the means of real-ization (Kirby, 2017). As such, educational agency is negotiated through a specific group of socio-material conditions, which will differently position educational subjects in relation to the inequalities and advantages endemic to the phenomenon. Education and/or career "pathways" are a common discourse in secondary schooling, currently conceived of as navigable trajectories for individual students to produce, pursue, and negotiate. This conception, however, works to conceal the endlessly entangled relata that enact agentic possibility over time in the open, messy, social contexts of education. These means of realization are not simply cruder versions of capital. What we refer to includes material worlds and the conditions of interaction, including how these manifest versions of self without being reduced to an economic conversion. In this sense, movements towards democracy for, and through, education share kinship with Barad's ontology in their focus on a coming together, a being in common, and a community of events that are dependent upon their relations, to produce the circumstance for the enactment of, for example, knowledge as only ever being co-constructed.

New understandings of educational agency (as enacted in relation) provide ways of rethinking current education structures, purposes, and practices (that largely reward middle-class dispositions) shifting towards more inclusive modes that recognize a wider array of dispositions as being important and productive. How this might be achieved is beyond the scope of this paper, although Apple (2015), following Fraser (1997) on the importance of engaging with the politics of redistribution and recognition within a social justice framework, has argued for the identification and sustenance of decentered unities.

These are spaces crucial for educational and social transformation enabling progressive movements to find common ground where different groups can "engage in joint struggles without being subsumed under the leadership of only one understanding of how exploitation and domination operate in daily life" (Apple, 2015, p. 302). Certainly, the significant ongoing funding of equity and widening participation in tertiary education in Australia is a field where rampant neoliberal policy imagination, with the individual as the unit of focus, has created difficult tensions and contradictions for educational policymakers and practitioners across the educational landscape, including schools. There is now extensive literature highlighting the problematic ways in which a policy focus on personal aspiration sits directly at odds with the realities of why particular groups are underrepresented in further and higher education (Burke, 2012; St Clair & Benjamin, 2011; Whitty, Hayton, & Tang, 2015). Arguably, even if one were to adopt a neo-social mode of governance perspective, governments run the risk of ineffective large-scale educational investment where projects are beholden to policy-making efforts that have adopted mis-placed notions of agency. We advocate for developing new understandings within educational policy of the broader ontological conditions of meaningful and democratic engagement within education. This is conceived as a project where a productive reconstruction of our conception of agency, via shifting our "ontological primitive" for educational research and practice, can make a promising contribution to interpreting how the impacts of different contexts of education restrict and empower, with the ultimate goal of producing a sharper understandings of how education is enacted. Biesta (2007) recommends that what schools can do—or at least should try to do—is to make democratic action possible. It is in relation to this commendation that our paper offers a foundation for reconceptualizing what can be collectively enacted, building on new ontological understandings of what knowledge and knowing is in educational contexts.

CONCLUSION

Australian educational policy is worryingly wedded to a conception of education as a series of fully agentic and rational subjects acting to maximize their own self-interests. As we have discussed above, this is a commitment that reduces the opportunities for meaningful, democratic education and ignores the broader relational struggles that restrict the possible strategies and opportunities available to differently positioned educational actors. This commitment also misrecognizes the inequalities that the peculiar contexts of education operate within and assumes a firm dichotomy between the fully interior rational subject on the one hand and a passive, neutral space for interactions on the other.

Our argument brings attention to the value of reconceiving these relations via a problematizing of agency. New materialist and agential realist approaches are considered here as offering a subversive means of reconceiving agency and the neutrality of space and nature. These re-conceptions propose novel pathways for recognizing relations as the ontological precondition, facilitating possible ways forward for democratic education. Approaching education as a broader system of agential relations allows us to rethink agency "as happening in the spaces of the intra-actions rather than in the humanist sociological account of institutional structure vs human agency" (Ringrose & Renold 2016, p. 223).

Certainly, further attention needs to be paid to the ways in which relations within education are still generally and affectively produced through broader social systems and, consequently, performed within localized educational contexts. Many of these contexts will simultaneously conform to and resist these broader socio-material webs, and this must be recognized as part of the formation of agency. While this may be a small contribution to reconceiving of education as itself an enactment of agency, the need to rethink the individual has become a critical step towards imagining greater equality and access in Australian education systems. This reconceptualization of education as agency brings with it the possibility of new comparative education perspectives as, while localized in their realization, these agentic formations emerge within an increasingly globalized set of policy and practice fields beholden to a problematic neoliberal imaginary of the hyper-individual.

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Performative practices and 'authentic accountabilities': Targeting students, targeting learning?

Ian Hardy
University of Queensland, Australia: *i.hardy@uq.edu.au*
Vincente Reyes
University of Queensland, Australia: *vicente.reyes@uq.edu.au*
M. Obaidul Hamid
University of Queensland, Australia: *m.hamid@uq.edu.au*

This paper critiques recent practices in schooling, particularly efforts to enhance student learning outcomes for more performative purposes. Such practices have become increasingly prevalent as part of a broader trend towards results-oriented accountability practices, with concomitant pressures upon teachers and students to achieve particular outcomes as evidence of improvement—and often in relation to various forms of local, national, and international standardized tests. The research draws upon experiences of teachers in one school in Australia as they grappled with various reform initiatives as part of their overall School Improvement Plan to enhance educational outcomes for students. This paper draws upon theorizing and research into specific practices of performativity, particularly how children, data and teachers' learning processes are all constituted as "targets" for continuous intervention. As well as revealing the problematic effects of more performative accountabilities, the research also shows how alternative more "authentic" forms of accountability were in evidence and enacted by those constituted through these processes. This paper seeks to provide insights into how teachers' work and learning are heavily influenced by performative pressures, but also how teachers might contest the more instrumental and technicist influences of such practices.

Keywords: accountability; performativity; standardized tests; data; teacher learning

INTRODUCTION

This paper critiques recent practices in schooling, particularly efforts to enhance student learning outcomes for more performative purposes. Such practices have become increasingly prevalent as part of a broader trend towards results-oriented accountability practices, with concomitant pressures upon teachers and students to achieve outcomes as evidence of improvement—and often in relation to various forms of local, national, and international standardized tests. The research draws upon experiences of teachers in one school in northern Queensland, Australia, as they grappled with various reform initiatives as part of an overall School Improvement Plan to enhance educational outcomes for students. While much has been written about performative practices in schooling settings around the world, particularly in relation to various high-stakes testing regimes, the

specificity of how such practices play out in practice in teachers' work and learning is an area for ongoing inquiry. Furthermore, the way in which such practices are not simply homogenizing but how they might be open to challenge requires investigation and interrogation. This paper draws upon theorizing and research into specific practices of performativity, particularly how children, data, and teachers' learning processes are all constituted as "targets" for continuous intervention. As well as revealing the problematic effects of more performative accountabilities, the research also shows how alternative more "authentic" forms of accountability were in evidence and enacted by those constituted through these processes. In this way, the paper seeks to provide insights into how teachers' work and learning are heavily influenced by performative pressures and also how teachers can contest the more instrumental and technicist influences of such practices.

PERFORMATIVITY, ACCOUNTABILITY, AND PROFESSIONAL PRACTICE

Performative practices have had significant effects upon educators' work and learning. In his authoritative account of performativity in educational settings, Ball (2003) referred to performativity as:

> [A] new mode of state regulation which makes it possible to govern in an "advanced liberal" way. It requires individual practitioners to organise themselves as a response to targets, indicators and evaluations. To set aside personal beliefs and commitments and live an existence of calculation. (p. 215)

Ball (2003) argues performativity, alongside processes of managerialism and the market, operate as the three key policy technologies of educational reform. These approaches sit in tension with and seek to replace earlier professional and bureaucratic approaches that are seen as intrinsically self-serving and/or insufficiently responsive to changing economic, social, and political needs. Performative practices rely upon various "judgements, comparisons and displays as means of incentive, control, attrition and change" (Ball, 2003, p. 216). Significantly, performativity hinges on acceptance that various forms of measures, or "displays" of quality are worthy ways to capture the "quality" of that which is under investigation: "As such they stand for, encapsulate or represent the worth, quality or value of an individual or organisation within a field of judgement" (Ball, 2003, p. 216). Notably for the argument presented in this paper, Ball (2003) also flagged the notion of various "targets" as an example of the sorts of "discursive interventions" introduced into public sector organizations to effect improvement.

Such an approach to performative practices reduces judgement to various input-output relations and means-end logics. As Bartos (1990) argued almost three decades ago, performative practices come to dominate in settings where alternative conceptions of understanding ("other grand narratives of social cohesion" (p. 351)) lose their influence. Jeffrey (2014) flags how a key reason for the lack of professional control in education has been because of the increased influence of market-oriented models that seek to foreground links between education and economic prerogatives. Issues of citizenship, participation and democracy more broadly become attenuated within such debates as the clamour and concern about relative economic competitiveness of nation-states becomes increasingly tied to educational attainments, particularly in relation to international markers of achievement.

Various large-scale assessments at international, national, and provincial/state levels are construed as central to the constitution of necessary forms of educational accountabilities, cultivating what Lingard, Martino, Rezai-Rashti, and Sellar (2016) refer to as "globalised educational accountabilities." This is also part of the intensely comparative processes that have come to characterize educational practices more broadly, including how the "global' eye" (via international tests) and the "national eye" (via national tests) govern education in complementary ways (Nóvoa & Yariv-Mashal, 2003). Under these circumstances, performative practices constitute part of a broader "neoliberal cascade" (Connell, 2013) that has afflicted education and that seeks to reposition schooling within the prism of the market.

Such competitive practices are evident in how students make sense of their schooling experiences, including in relation to external markers of success, such as external tests (Keddie, 2016), but also how teachers are similarly constituted through such performative pressures and demands. There is a sense in which those influenced by these demands are constructed through particular mechanisms for measuring, monitoring, and managing student learning, and that, while there may be advantages for some students through such processes, this requires much greater scrutiny (Hardy, 2017). This includes the way in which such mechanisms operate to "make individuals 'want' what the system needs to perform well" (Lyotard, 1984, p. 62).

ALTERNATIVE ACCOUNTABILITIES

In contrast to these more performative practices and restrictive conceptions of accountability, O'Neill (2013) advocates what she describes as much more "intelligent" forms of accountability. Such an approach acknowledges that various "secondary" uses to which student assessment results are put can be deeply problematic, particularly when used for purposes remote from original intentions, such as to guide or support particular policy arguments.

Drawing explicitly upon Strathern's (1997) forthright criticism that "when a measure becomes a target it ceases to be a good measure" (p. 308), O'Neill (2013) argues for the importance of trust in professional judgement and decision-making. For O'Neill (2013), "[a]n intelligent form of accountability would need to offer the public, parents and pupils evidence which they can use as a basis for placing or refusing trust in teachers, in exams and in schools" (p. 14). O'Neill (2013) argues against various sorts of "performance indicators" that use what she describes as "bogus units of measurement" (p. 14). Such measures need to be challenged and greater recognition afforded to the position that substantive educational outcomes cannot be counted or ranked. She is also critical of the use of such problematic numbers that encourage various perverse incentives—incentives that have been found in the Australian context to include gaming at the state level and not just within schools (Lingard & Sellar, 2013). Relatedly, rather than assuming some sort of comparability between subjects to "game" accountability metrics, there needs to be much greater attention to the integrity and inherent benefits of particular kinds of knowledge. The result would be more informed and independent judgements that could be communicated intelligibly to the multiple audiences to whom various forms of account should or need to be provided.

Lingard et al. (2016) refer to "rich accountabilities" to capture alternatives to the performative accountabilities encouraged by various national and international testing

regimes. Focusing upon what they describe as the "democratic deficit" inherent in a landscape in which politicians, policy makers, and those engaged in edu-businesses of various sorts seem to be the dominant actors in educational decision-making, and in which educational privatization has become increasingly diffuse (Verger, 2016), they argue for forms of accountability that are context-responsive. Such approaches take into account the perspectives of local community stakeholder groups about the needs of those in their schools and what they value. They also argue for a position that seeks to identify "relationships of complementarity rather than contradiction" (p. 153) regarding these "richer" forms of accountability. Such approaches help reconstitute the relationship between various forms of data collected in schools and schooling systems, the specific practices that constitute teachers' practices in these settings and the values that underpin the collection of such data, and alternative approaches to accountabilities.

Consequently, even as they have come to exert so much influence over professional practice, there remains scepticism about the worth of more performative approaches to schooling and accountability. From the outset of their widespread use, and again drawing upon Bartos (1990) in relation to performance indicators in school and university settings, "even from the core of the administrative apparatuses responsible for the propagation of performance indicators emerges a remarkable diffidence about their worth" (p. 352). Also, in the context of these globalizing educational accountabilities (Lingard et al., 2016), it is important to consider not only the response of the nation and sub-national bodies with responsibilities for education (particularly important in federated jurisdictions such as Australia where the individual states/provinces have constitutional responsibility for education provision), but also how those "at the coal-face", teachers and principals in schools, seek to make sense of the increased pressures upon their work and learning. It is these experiences that constitute the substance of this paper.

CONTEXT: POLICY AND PRACTICE

The Australian and Queensland policy contexts

Since 2008, through the National Assessment Program-Literacy and Numeracy (NAPLAN), national testing has been a key feature of the Australian schooling landscape. Such testing is part of a broader trend towards increased homogenization of schooling practice in Australia. During the past decade, schooling has been arguably reconstituted in dramatic ways through an increasingly national agenda—in curriculum (through the instigation of the Australian Curriculum), in teaching (through development of the National Professional Standards for Teachers), and in assessment (through NAPLAN). These processes have been particularly acute in the Queensland context, where relatively low performance in the inaugural test in 2008 led to increased scrutiny of teachers' practices. A heightened sense of anxiety was also cultivated through the commissioning of the Australian Council for Educational Research to conduct a review of the state of literacy, numeracy, and science performance in Queensland schools at this time. The resulting report, *A shared challenge: Improving literacy, numeracy and science learning in Queensland primary schools* (Masters, 2009) and subsequent school auditing processes arising out of the report, helped set the scene for much closer scrutiny of schooling practices in Queensland.

The school

All schools in Queensland felt the pressure occasioned by the focus upon students' results at this time. Schools were subject to various "Teaching and Learning Audits" as part of quadrennial school reviews as well as when a new principal was appointed or when schools requested such reviews. Even "Independent Public Schools", that is, schools deemed capable of taking greater control over budgeting and staffing, such as the school reported upon in this paper, were subject to scrutiny—however, this was considered more "light touch" than in other public/state schools. While these schools had less formalized relationships with their local regional/district education authority, pressures and demands from the "centre," as expressed through the regional educational authority, continued to be exert influence.

Serving a lower to middle class community in the northern half of the state, the school referred to in this paper had approximately 850 students, 10% of whom identified as Indigenous, and was relatively large by Queensland standards. As part of its efforts to foster ongoing teacher learning and school reform, the school encouraged teacher learning through what it described as various "Inquiry Cycle"—"Spirals of Inquiry." However, this was only one initiative among several stimuli, including various "short-term data cycles" and "data conversations," to encourage teachers to consider the nature of their practices vis-à-vis student learning. This paper explores the nature of these practices in relation to how they constituted teachers' work under these broader policy conditions of ongoing scrutiny of data as evidence of student and teachers' teaching.

The data

Data comprised interviews with 23 teachers (approximately half the teaching staff) from Prep to Grade 6, undertaken in the first half of 2017. These interviews were the latest in a series of data collection processes, including ongoing observations of professional development meetings, and interviews with teachers about the nature of their work and learning. The interviews focused on the nature of teacher and student practices in the context of efforts to enhance teachers' learning and school reform practices more generally, including various short-term data cycles and data conversations. To better understand these practices, an emergent thematic analysis approach (Shank, 2002) was undertaken, involving reading and re-reading interview data, in light of existing understandings about the performative nature of schooling practices.

This analytical process revealed three key themes pertaining to: the targeting of specific students, especially those deemed likely to be moved from just below failing to passing grades; a focus upon particular kinds of "target data" deemed important for "keeping track" of student progress, and; a focus upon the short-term data cycles as vehicles for "tracking" these students.

**TARGETING STUDENTS:
"KIDS THAT TEACHERS THINK THEY CAN SHIFT"**

There was a clear sense in which targeted students were those students just below a C or pass level. As in other international contexts (e.g., US, see Booher-Jennings, 2005, and UK see Gillborn & Youdell, 2000), these were students who, with a little extra attention, were deemed to be able to attain a passing grade. This was also very much a "targeted

intervention" in that a strategic approach was deemed necessary to affect the sorts of improvement demanded by broader system imperatives:

> You usually aim for a child who's around the D mark because some of those poor little darlings in the E—it's quite possible they're always going to be an E for whatever their story is. (Celeste, Prep teacher, May 2017)

> I've got four sitting on a D, so we only sort of targeted two or three from each class... [The 4th person] has other learning difficulties that, yeah . . . I guess in a way she's, she's receiving support anyway. So, the other ones are less targeted in a way. (Jacinta, Year 5 Teacher, May 2017)

As part of this process, there was recognition that while other students could be targeted, there was some sense of justification in trying to "get . . . those low kids up to standard.'" Targeted students were those students who were deemed to be just below a pass level in English and who, with additional assistance, were construed as able to improve their results:

> Because they're the ones that they're not quite at the level, like they are a bit lower, and so we're identifying what they need to increase their knowledge base. (Margot, Year 1, May 2017)

> They're just sort of sitting below where they need to be. (Jacinta, Year 5, May 2017)

> These target students are students that, I would say are just below a passing level in English, and that could be in all areas... So, my aim for those target children is to get them to a C level. (Corinna, Prep Teacher, May 2017)

Reflecting the constitutive power of these performative pressures (Ball, 2003), some teachers engaged in elaborate categorizing processes as a result of this targeting, and sought to promulgate how they were seeking to give attention to other students, not just those immediately below the benchmark:

> My "Smarties" would be the ones that are really close to a C if you gave them that extra target area. And then the "Skittles" would definitely be that D student that you really hope that you can shift to a C. (Larna, Prep, May 2017)

Importantly, these students were perceived as those "who could be shifted":

> So, in the majority of the cases it's Ds to C— kids that teachers think they can shift with a bit of focused intervention. (Sonia, Head of Curriculum, March 2017)

However, there was also recognition that this was not straightforward, and that attention needed to be given to other students as well:

> We are trying to give equal amounts of attention to most groups and differentiating for most groups... the others deserve just as much attention to try and get their grades up. (Larna, Prep, May 2017)

That this process of responding to students' needs was challenging was evident in recognition that students' results were not stable, but always subject to change. In a sense, they were "shifting targets." and this notion of targeting only made sense in relation to closer scrutiny of their actual work:

> And see, even now, I could probably change some of my kids... because the Cs... depending on the task, they might not be any good at—a lot of them, they do lack the comprehension. (Faith, Year 4 Teacher, May 2017)

There were challenges in relation to this work of fostering these students' improvement:

> Um not all of them, not all of them [are improving at satisfactory rate]... two out of the three have definitely moved up, whether it would be to a solid C; we're still, I'm still hopeful... Yep, work in progress. (Jacinta, Year 5 Teacher, May 2017)

There was also hesitation around recognizing students' improvement if there were concerns about the consistency of their responses:

> Because I don't want—in a way, I don't want to give her a C and then all of a sudden, she dives, it's not as good. She has improved, but whether it's enough to be a C. (Faith, Year 4 Teacher, May 2017)

Teachers also expressed reservations about only targeting specific students more broadly, leading to an intensification of focus upon all students:

> Each group becomes a targeted group rather than just your one . . . I like to target all of my students. (Felicia, Prep teacher, May 2017)

As for her colleague mentioned earlier, for this teacher all students were explicitly acknowledged as worthy of attention, not just those targeted for additional interventions. The conception of accountability at play was somewhat broader, more "intelligent" (O'Neill, 2013), than that characterized by more performative concerns alone.

TARGET DATA: 'IT LOOKS BETTER'

Students were targeted because of concerns about their performance and because this performance was seen as amenable to intervention and, ultimately, enhanced results, particularly in relation to regionally sanctioned data. There was a considerable focus upon targeting these students as a way to ensure the data "looks better," and even as it was acknowledged that these students would not always be the ones who were "targeted":

> Because it looks better in the data. It's data-driven. (Leila, Year 3 Teacher, May 2017)

> I guess it's always been a bit of a focus and I guess the idea is if you push those Ds to Cs, your LoA data looks better. But I know that there's talk that perhaps in the next cycle it might be a focus on how do we get those Cs up. So, it won't always be that. (Kelsey, Year 4 Coach, March 2017)

There was speculation among some teachers that this pressure to ensure the data "looks better" was seen as a regional directive, influenced by broader national (NAPLAN) data outcomes. Pressure "from above" was seen as influential:

> I don't know whether it's pressure from [the region]—I know it's . . . talked about the triangulation of the data . . . our NAPLAN results say, last year, were showing that our students were doing better than what we were giving them on their [A-E] achievement. (Leila, Year 3 Teacher, May 2017)

> I think personally it's pressure from "above" on admin to get the results lifted. So, kind of filters down to us where it's our job to get them lifted. It's all about data . . . I think [principal] is probably getting a, "Why have you got so many Ds? What are you doing?". (Linda, Year 4, March 2017)

However, there were no such hesitations in relation to understanding the source of the focus upon enhancing data within the school more broadly among other teachers. That the principal had to meet specified targets himself in relation to regional targets was explicit for some teachers. These targets placed increased pressure on teachers, even as they recognized that different cohorts of students performed differently from year to year,

and meant it was not practical to automatically push for ever increasing school-wide attainment targets:

> [Principal] tries not—as far as possible—he tries not to put the pressure on. But in his role, he has to meet targets from the ARD [Assistant Regional Director] and above for what regional directives are. So, if we have a target of— and it was—80 per cent of students would have a C or B or A . . . And then it was, "Well, you're nearly there, so why not make it 85!" . . . Okay so now, oh my goodness you've killed yourself to get to 83 per cent, so now let's raise it to 87 per cent! And as much as [principal] tries not to make that a pressure, it is a pressure! When you look at your year level and each, each group is different. So, my group of students this year, the results, the percentage results this year, will be different from last year. (Felicia, Prep teacher, May 2017)

However, while there was a sense that there was much attention on data for the sake of data within the administration team within the school, teachers resisted such characterizations:

> They [administration team] want to improve their data . . . But that's not what it's about. It's about trying to improve the academics about that child, the learning of that child. But for them [administration team], it's about the improvement in their data . . . they have their little graphs and their little walls. (Celeste, Prep, May 2017)

In a sense, this teacher sought to resist more performative pressures around the data as she critiqued the nature of the relations to data among members of the administration team.

At the same time, and in spite of these pressures, there was also a sense in which teachers were striving to improve the educational experiences for these students, to help them attain age-appropriate benchmarks:

> We've got the target students that we're trying to really make a difference. I think we targeted about five students each, some four, some six . . . To try and get them to a level where they are at age-appropriate. (Eric, Year 6, May 2017)

Teachers also seemed to take up this agenda themselves. This included helping students to express themselves in their written expression, as well as orally:

> I feel that if I can sort of put a bit extra into them and just sort of consolidate—like I feel that they've got the skills there; they just need that extra bit of a push to build upon their knowledge and build their confidence so that they can be sort of moving up, and just sort of consolidating their understanding . . . Orally, they can answer any questions I give them and stuff like that, but it's getting it into writing. (Frances, Year 1 Teacher, March 2017)

For a colleague, the capacity to "measure" learning was not considered the most important aspect of teaching and learning (cf. Hardy, 2017). It was the actual work students produced that mattered, rather than numeric renderings of such work. The "numbers" were also explicitly recognized as problematic, and a function of the variability within standardized resources, rather than a reflection of students' actual capacities:

> Work samples that the children have produced mean a lot more to me than a number or a letter. So, a writing sample or a speaking sample where they're showing exactly what they can do is far more informative than, "They're reading level 3" . . . As far as reading is concerned, that number doesn't mean anything because across a number 3, level 3, there is a range of texts across that that meet the level 3 criteria! And they might be able to read one of them, but it doesn't mean they can read that other one. (Felicia, Prep teacher, May 2017)

The specificity of practice, and samples of student work as evidence of students' learning, were the focus of attention—necessitating professional judgement (O'Neill, 2013)—

rather than various letters and numeric grades that purported to serve as proxies for student learning.

SHORT-TERM DATA CYCLES: 'WHICH PLATE DID I DROP?'

As part of the focus on the targeted "D to C students," and their associated "target data," teachers engaged in various processes of collecting data about these students' progress on an ongoing basis. Described as "short-term data cycles," this entailed teachers collecting data every week as well as at the end of (typically 5-week) units of work and each term on target students' performance. Short-term data cycles also involved teachers sitting with a dedicated "coach" for that year level and discussing the proportion of children needing to attain a "C level," and approaches and strategies to achieve this end. The role of the coach was also central to determining the number of "targeted" students likely to achieve this goal:

> So, yesterday I was with [Prep Coach] and we made a goal of 18 students out of 25, to at least get a C level. (Corinna, Prep Teacher, May 2017)

> Short-term data cycles. So, we've got our literacy coach, and each year level will have someone that they work with, and we have time where we sit with them weekly, just for an hour, and that time is usually used to review the work that you've been doing over that week. (Beryl, Year 2 Teacher, March 2017)

This also entailed constant checking from week to week to give students the best possible opportunity to attain a passing grade by the end of the current unit:

> We'll focus on work samples I bring from how they've gone for the week, to then guide where we then head, what needs to be covered again or focused on for the next week. (Jacinta, Year 5 Teacher, May 2017)

The short-term data cycles were considered valuable for enabling teachers to reflect upon their practice. Again, reflecting the value of professional judgement (O'Neill, 2013), such reflection about targeted children also contributed to moving beyond broad understandings of their work to deeper engagement in relation to teachers' understandings of their practice:

> Yep, so that's been really helpful this year actually to have that weekly meeting with [Year 5 coach] and just to sort of—you don't get a lot of time to sort of sit and reflect about what you're doing, so it does force you to sit and focus on what it is that you are doing on a daily basis, and on a weekly basis. (Jacinta, Year 5 Teacher, May 2017)

There was also a sense that the focus upon these students would not be forever, and that there would be opportunities for other clusters of students to have increased intervention in the future:

> Yeah so, the spiral of inquiry—this is what we kind of went with for the moment, but we are looking at shifting it more from your Cs to your Bs or Bs to As later in the year. (Anastacia, Year 3 Coach, March 2017)

For other teachers, however, and reflecting more "triage-like" practices that advantaged some students over others (Booher-Jennings, 2005; Gillborn & Youdell, 2000), the focus upon D students that could be moved from a D to a C, seemed more long-term:

> Well this is my second year here and we have only ever focused on D students. That's not changed since I have started. (Linda, Year 4 Teacher)

> As a school, each year, we have always picked kids that we have felt that if we gave a bit of a focus to, that they could move from that D level to the C, and just sort of broaden and consolidate their understanding of everything. (Frances, year 1, March 2017)

Some teachers expressed concerns about how this focused attention upon these students could affect the learning of other students as well:

> They're taking a lot of my time in the classroom, I would say. I'm finding it hard to have one on one conferencing with other students (Dorothy, Year 4, March 2017).

Teachers struggled with what the focus on these "borderline" students meant for the other students in their classroom, even as they were sympathetic to the broader aims of assisting these students:

> Sometimes I'm not sure how many students I should be targeting . . . And I don't want anyone to be left behind. So, that's obviously, like a concern . . . It's like I see the value in having target students, but really, I want them, as any teacher does, all to be improving. (Corinna, Prep Teacher, May 2017)

There was also considerable pressure upon students, such that some students were felt not to cope with the increased attention to their performance:

> I do find some of them, because you work with them so much . . . they have got the pressure put on them. And because they are those struggling ones, they can't deal with that sort of— they sort of, in a way, just give up . . . Because we've got the pressure to get them up so they've got the pressure of trying to do what we want . . . they struggle still. (Faith, Year 4 teacher, May 2017)

Reflecting a sense of accountability to their students and not just system measures (Lingard et al., 2016), teachers spoke about the challenges of addressing the needs of all students, and the pressures they felt to do the best they could for all students in their care:

> I like to target all of my students . . . I have to keep that balance and I don't want them missing out. And that's where it would be really sad to have, Okay I've got my Ds to Cs but you know what? I didn't get any Bs to As! Or my As drop to Bs because I didn't give them what they needed. And that's the spinning plate. Which plate did I drop? And it smashed. And that's the nature of our job. It's just so complex. (Felicia, Prep teacher, May 2017)

That the processes of more performative targeting could be contested was exemplified in the way these educators sought to address the needs of all their students, and how they sought to contest attention to the learning of certain targeted students. However, this was difficult work.

PERFORMATIVE PRACTICES AND 'AUTHENTIC ACCOUNTABILITIES'

As Ball (2003) notes, "what it means to teach and what it means to be a teacher (a researcher, an academic) are subtly but decisively changed in the processes of reform" (p. 218). Language matters in relation to this reworking of professional identity and being (Ball, 2003). In the analysis presented here, the sheer extent to which teachers used the term 'targets' and talked about their work and their students in light of various pressures to ensure attainment of particular outcomes reflects the discursive power of these technologies. Importantly, what these teachers seemed to be learning was that what mattered was the ability to engage with specific 'targeted' students, to ensure that the data of their students reflected year level standard, and to somehow manage as best they could the conflicting demands on their time as they sought to respond to the needs of all their students and more performative demands.

In one sense, there was something seductive about focusing upon the targeted students. These were, after all, under-performing students. These were students that teachers felt that if they 'gave a bit of a focus to,' they could enhance their learning. The short-term data cycles were premised on the assumption that through specific, targeted interventions, it was possible to redress student underperformance quickly, and that because some of these students had been under-performing for some time, the more quickly they attained their respective year levels, the better would be their future opportunities to learn in subsequent years and beyond school more generally. In a way, these teachers felt the weight of responsibility for these struggling students, and a level of professional accountability to do the best they could for these students. Similarly, the way in which teachers valued the opportunity to engage in detailed, regular and structured conversations as part of the short-term data cycles was a form of professional learning that helped them develop a sense of how their students were progressing—part of the logics of professional accountability to their students and colleagues (O'Neill, 2013). Such sustained attention upon students deemed likely to benefit from additional assistance seemed productive.

However, these were also students 'singled out' and 'identified' for specific attention and intervention, and in ways not available (at least at that point) to other students. There was clear evidence of fissures and fractures in relation to more performative renderings of professional practice—and of teachers' conceptions of themselves as teachers and the children as students. That such ruptures played out in concerns on the part of teachers about the ramifications of such targeted interventions reveals the hesitations many teachers had about these processes. The focus on specific students was a recurring concern for teachers as they sought to ensure that they 'targeted' all students, not just those who were somehow construed as "suitable cases for treatment" (Gillborn & Youdell, 2000, p. 133). This was a different form of 'targeting' however, and more reflective of deep convictions—an authentic remonstrance—about the need to seek to enhance learning opportunities for all students. This included concerns about not only increased pressure upon teachers but also how increased pressure on some of these students was having a deleterious impact upon their sense of well-being, resulting in some students "in a way, just giv[ing] up." Such concerns resonate with Strathern's (1997) argument that "when a measure becomes a target, it ceases to be a good measure" (p. 308). One teacher's reference to the metaphor of each individual student's learning as a spinning plate and the potential for it to be dropped, to be 'smashed,' reflects the seriousness with which these teachers considered their work and that the focus upon attaining specific targets had reduced significantly the efficacy of such measures in relation to all of their students' learning.

Perhaps what is needed is not only a conception of trust and 'intelligent' accountability that helps give confidence to the public, parents, and pupils as to whether or not they should trust teachers, exams, and schools (O'Neill, 2013), or 'rich' accountabilities focused upon broader social and systemic supports for teachers' learning (Lingard et al., 2016)—essential though these are—but a form of accountability that draws upon teachers' own knowledge, reservations, and hesitations as 'authentic' forms of understanding about whether what they are doing is indeed in the best interests of their students.

More authentic accountabilities foreground the needs of all students in relation to their current learning capacities and capabilities—some of which may be able to be ascertained

from various forms of more standardized data (such as test scores, and various forms of 'levelled' readers, or more generic regional indicators). However, such accountabilities pertain to evidence of the broader social and academic development of students more broadly, cultivating a sense of purpose and positioning as future citizens working for a more equitable, sustainable (ecologically, economically, and politically) world order. Such an approach would help rebuild confidence in the teaching profession and help to recalibrate and reconstitute the forms of professional knowledge needed under current policy conditions of acritical trust in numeric conceptions of schooling attainment as somehow valid proxies of education (Connell, 2013).

These more 'authentic' approaches seemed to be evident in the way teachers flagged how it was actual instances of student work (student work samples) that mattered, rather than 'a number or a letter'. Similarly, criticisms of "admin's . . little graphs and little walls" reflect a counter to more overtly performative practices, with their foci upon particular measures and data as proxies for student learning. The way in which some students "with other learning difficulties" were perceived as already "on my radar" revealed how processes of keeping account of all students and their needs were crucial, and very much a part of what these teachers were seeking to do.

While recognizing that teachers' professional practice should be subject to scrutiny, much greater trust and respect for the professional capacities and responsibilities of teachers who genuinely seek to foster the best for their students would seem a productive starting point for challenging performative pressures and promoting a sense of professionalism that extends current understandings of intelligent accountability. Such responses seem to complement the sorts of 'rich accountabilities' that draw upon the perspectives and input of a wider range of stakeholders in education (including the broader community) (Lingard et al., 2016). However, given the supposed demise of professional accountability (Ranson, 2003), focused attention upon teachers as active actors and interrogators of more performative practices would seem essential for redressing current concerns in relation to performativity surrounding schooling.

The ways in which teachers interrogated the more reductive approaches to data within the school also reveal more evidence-informed rather than 'data-driven' approaches to teachers' learning. Such approaches entail teachers interrogating and critiquing multiple forms of evidence of their work and learning and gesturing towards a more 'researchly disposition' (Lingard & Renshaw, 2009). Such perspectives challenge more problematic performative practices, even as all forms of data simultaneously constitute opportunities for genuine interrogation of student work; this latter point is in keeping with Lingard et al.'s (2016) argument about the complementarity rather than contradictions that can and should attend various forms of assessment data.

Even as some may argue that we have witnessed the 'demise of the age of professional accountability' (Ranson, 2003, p. 459), the data would suggest that teachers have not simply 'given up' on their professional responsibilities, understood as ongoing, context-responsive approaches to addressing the needs of their students. However, they also struggle to be sufficiently responsive to these needs in the context of more performative practices. What seems to be missing are 'opportunities to contest, discuss, and debate the value and purposes of schooling' (Lingard et al., 2016). Such opportunities would help contribute to a sense of authenticity about educational practice and its outcomes that seems to be missing within more performative discourses. And in the context of complex environments, such as that presented here in which the needs of Indigenous students

continue to require addressing much more substantively (alongside other marginalized students), the focus of standardized measures of achievement present as indicators that effectively inhibit the nature of the dialogue that has to ensue about students' needs. However, even as more performative practices have had significant influence, alternative, more 'authentic' approaches and focuses have sought to focus necessary attention upon the actual practices of students and teachers as they have sought to reorient more reductive demands. Such responses could help fuel productive responses, including at the national level and internationally. Such possibilities are particularly important, given how broader global processes are always and everywhere heavily mediated by the particular histories and political conditions that characterize national policies and contexts (Carnoy, 2016).

CONCLUSION

In a sense, the hesitations expressed by teachers about the focus upon target students, and emphasis upon data for the sake of data, reflect concerns about the authenticity of teachers' work as educators. While more performative practices clearly exerted influence, these teachers' efforts to critique the targeting of specific students, the focus upon data for its own sake, and attention to the short-term data cycles as vehicles for effecting performative improvements also provide clear evidence of concerns about the authenticity of the educational provision of their work and learning. Such responses reflect a form of professional practice that genuinely and 'authentically' seeks to minimize the problematic effects of more performative practices that currently characterize schooling in Queensland, and other national and sub-national settings, even as more performative practices exert influence.

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School occupations, knowledge production and new strategies in defence of public education in Brazil

Débora C. Goulart
Universidade Federal de São Paulo, Guarulhos/São Paulo, Brazil:
debcgoulart@gmail.com
Fernando L. Cássio
Universidade Federal do ABC, Santo André/São Paulo Brazil:
fernando.cassio@ufabc.edu.br
Salomão B. Ximenes
Universidade Federal do ABC, São Bernardo do Campo/São Paulo, Brazil:
salomaoximenes@gmail.com

The uprising of secondary school students in the state of São Paulo (Brazil) is related to a type of collective action that, although recent, finds support in other anti-neoliberal and anti-capitalist movements, with forms of action and organizational dynamic. For a long time, no social movement had expressed such power of mobilization, rupture and resistance in Brazil as the recent school occupations. This article revisits some aspects of resistance towards the policy of "school reorganization" in São Paulo, 2015–2016 and discusses the resistance strategies that emerged from the occupations, indicating a renewal of struggles for democratic education in Brazil. In particular, we examine the interaction between student movements, public universities and the justice system in the context of school occupations and consider how the fertile field of resistance and solidarity led to the emergence of the Public-School and University Network (REPU). The REPU proposes a closer relationship between public universities and movements for the struggle for public education, constituting a singular space for knowledge production and political action.

Keywords: Democratic Education; Social Movements; Educational Reforms; University

INTRODUCTION

At the end of 2015, public-school students in the Brazilian state of São Paulo occupied more than 200 schools as a protest against a "school reorganization" policy imposed by the state government which would have resulted in the closure of almost 100 schools and the compulsory displacement of hundreds of thousands of students and teachers. This student political movement, hereinafter referred to as school *occupations*, later spread across the country and triggered the greatest resistance movement to educational policies by students since Brazil's 1980s re-democratization. The impacts of the 2015 school occupations are still visible.

This paper examines the rise of the Public-School and University Network (REPU), which emerged in the context of the 2015 school occupations. To do so, we begin by contextualizing the school occupations amid contemporary actions of resistance to the perverse effects of neoliberal politics in social organization and public policies. We then outline the phenomenon of school occupations that occurred in Brazil 2015–2016, discussing the main agendas and characteristics of the protests. We continue with describing the REPU, its emergence, characteristics, and dilemmas as a network of teachers and researchers who aim to produce knowledge and intervene in defence of public schooling and democracy. To deepen an understanding of the practice of this network, we present three of the network's initiatives. In the final part of this paper, we discuss the current challenges facing educational research for and with social struggles, in defence of democratic and quality public education in.

NETWORKS, WAVES OF PROTEST AND THE
SOCIAL MOVEMENT AS A WHOLE

Referring to the "Occupy Wall Street" movement, Davis (2012) stated: "if one erects a lightning rod, we shouldn't be surprised if lightning eventually strikes" (p. 43). The spark that ignited school occupations in Brazil was set well before the birth of the young occupants of 2015 with the *First Declaration of the Lacandon Jungle* on 1 January 1994, and the insurgency of the Zapatista Army of National Liberation against the *North Atlantic Treaty*. These events triggered a long period of resistance to neoliberal globalization, culminating in mass demonstrations and direct civil disobedience in several countries. These actions were characterized by a multitude of themes and the participation of diverse social sectors (Aguiton, 2002).

In this context, we consider the Brazilian school occupations as part of, what Barker (2014) calls, a "social movement as a whole," thus removing definitions that often characterize social movements as "multiple and relatively isolated entities" (p. 7). In this sense, the occupation movements in Brazil are not the manifestation of a reified student movement, but a new factor, with significant repercussions:

> A social movement is anything but a *homogeneous* entity. The image of a "network" is more suitable than that of an "organization" (Diani, 1992). Rather as *lacework* has multiple patterns, so also do movement networks: they consist of diverse groupings, organizations, individuals and the like, variously woven in relationships of cooperation and (sometimes) antagonism. (Barker, 2014, p. 9, original emphasis)

The heterogeneity of the movement's social circles broadens the range of themes and specific patterns that move it but do not weaken it. The movement involves waves of protest that result from the relationship between demands from the various social spheres and can lead to the advancement or containment of struggles in complex historical dynamics. As a result, we argue, it is not possible to understand the dimensions of conflict as dissociated from class dimensions as presented in the dynamics of the protests.

There is a fairly established research tradition on social and union movements in Brazil, as well as an emerging research agenda that has gained attention shortly after the cycle of protests in 2013. However, as Tatagiba and Galvão (2017) point out, there is a lack of studies of social protest in the country. To address this gap, they adopt a perspective that "seeks to insert protests in the dynamics of capitalism, connecting the local and global dimensions" (Tatagiba & Galvão, 2017, p. 3). This usefully articulates the economic and

political dynamics of conflict amid the crisis of capital in the neoliberal context and their unfolding in Brazil. In another perspective, Alonso and Mische (2017) start from the approach of protest cycles, seeking to incorporate the cultural elements of the processes, mechanisms, and repertoires of collective action that characterize certain cycles.

Starting with the financial crisis of 2008, Tatagiba and Galvão (2017) describe how the crisis of representative democracy, together with policies of austerity in peripheral countries, were concomitant to struggles for the maintenance of social rights and struggles based on gender, race, and class. The democratic-popular project supported by Brazilian working-class organizations formed in the 1980s—Workers' Party (PT), Unified Workers' Central (CUT), and Landless Workers' Movement (MST)—underwent programmatic changes throughout the 1990s and adopted a pragmatic democratism (Martuscelli, 2007). Once in government, PT established alliances with big financial capital, medium capital, and large industrial and agrarian capital (Boito Jr., 2012), without breaking with the expectations of workers and the increase of social spending.

This reconciliation of interests from different class groups in progressive governments was not an isolated phenomenon in Brazil. Some elements of this Brazilian pragmatic democratism are observed in other Latin American countries which have adopted a notion of autonomy with emphasis on citizen participation through institutionalized and limited channels (Rey, 2011; Zibechi, 2008). Zibechi notes that the opening of such channels of participation was accompanied by the compliance of militancy to the state apparatus, which led citizen participation to oscillate between an unconditional support for the government and a weak confrontation with low adhesion. Zibechi further argues that social programs have become instruments to diminish the organizational capacity of movements whose increasingly fragmented demands forestall the elaboration of shared agendas with high capacity of mobilization.

Alonso and Mische (2017) recognize the sharing of an autonomist repertoire in diverse protests, such as Seattle, the Arab Spring, the Occupy Movement, and in the occupation of European public squares. They present forms of decentralized and horizontal organization, with consensus-based decision-making and prioritized direct actions (violent or not), including damage to state or private buildings and occupations against, in general, state agents and private corporations. There is also a strong combination of political and artistic elements, such as performances, images, games, music, and clothing.

In Brazil, a mass protest occurred in 2013, with a set of actions that culminated with the Days of June (*Jornadas de Junho*). They were initiated by the Free Ticket Movement (*Movimento Passe Livre, MPL*) and emphasized large demonstrations against the increase of public transport ticket prices. In all manifestations, especially in those convened by the MPL, there was a strong presence of university students and secondary school students, with the latter already organized as a result of the work for the formation of student unions developed by MPL in previous years (Spina, 2016). The struggles for education, with the significant presence of students, are an important part of this period of conflicts, not only in Brazil but also in Latin America, such as the assemblies in Oaxaca, Mexico, and the Revolt of the Penguins in Chile, both occurring in 2006.

The expansion of the student struggle was also taking place in Brazil. On the one hand, there was the arrival of young working-class sectors at higher levels of schooling, generating pressure for conditions of permanence and progress in studies. On the other hand, there was a greater demand for more skilled jobs. With the institutional breakdown

of 2016 due to the parliamentary coup against Dilma Rousseff (PT), a new agenda of attacks on social rights was launched, with the abandonment of the ambiguity of previous governments in favour of a clearly neoliberal agenda. The government measures that triggered the rise of student occupations included budget cuts, suspension of investments, wage arrears, and reduction of school curriculum. While resisting the presage and implementation of those measures, the school occupation movements assumed the proposition of new alliances, practices, and priorities, concretely producing a renewed vision of the right to education, constitutionally guaranteed in Brazil, and educational objectives, in opposition to the reductionist and technicist trends of educational reforms.

SCHOOL OCCUPATIONS: A NEW CYCLE OF STRUGGLES IN DEFENCE OF THE PUBLIC-SCHOOL IN BRAZIL

The triennium 2015–2017 saw the birth of an unprecedented dynamic of struggles in defence of basic public education in Brazil, resulting from the emergence of a non-bureaucratic student movement with new tactics, aimed at direct resistance to educational managerial reforms with an authoritarian, technocratic, or reactionary nature (Campos, Medeiros, & Ribeiro, 2016). Throughout the student mobilizations, there was a diffuse denunciation of poor teaching conditions and the precariousness of public schools complementing the local agendas.

On 9 November 2015, the first school occupation took place in the State of São Paulo. The mobilization peak was reached in less than a month, with 213 schools occupied. This process, which radically changed the educational debate in the country, began on 23 September 2015. At this time, students and school communities were surprised by a proposal of school reorganization that would close 94 schools and separate in single-cycle schools[1] another 754 school units, implying the forced displacement of some 311,000 students and 71,000 teachers in the state, as well as the dismissal of thousands of teachers with precarious employment contracts (Moraes & Ximenes, 2016).

The inconsistency of the official arguments and the lack of transparency about the criteria that led to the choice of schools to be reorganized or extinguished contributed to increased concerns and general discontent. According to the government, there were idle vacancies in schools. This assertion was based on the alleged reduction of about two million students over the last 17 years in the state school system—an argument later rebutted in two studies produced by the Public-School and University Network (Cássio, Crochik, Di Pierro, & Stoco, 2016; REPU, 2016). It was also argued by the Department of Education in the State of São Paulo (SEE-SP) that, "from the perspective of learning," the separation of students into single-cycle school units would favour a superior performance in large-scale evaluations (SEE-SP, 2015). This study came to the public weeks after the announcement of the reorganization process and in response to dozens of critical manifestations from educational and research institutions, universities, teacher training institutions, and entities representing the educational field. Until then, it was a policy of enormous impact that, in addition to being decided unilaterally, had no technical

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[1] Schools that serve a single cycle of Basic Education in Brazil: Initial Years of Primary Education (ages 6 to 10 years), Final Years of Primary Education (ages 11–14 years) and Secondary Education (ages 15–17 years). The São Paulo government argued, without any empirical basis, that children and adolescents would learn better in single-cycle schools, using elite private schools as a model for their claims. Most of the elite private schools in São Paulo, however, serve children and youth from Kindergarten to Secondary.

justifications. The study (Pó, Yamada, Ximenes, Lotta, & Almeida 2015), *Analysis of the public policy of School Reorganization proposed by the government of the State of São Paulo*, produced at the Federal University of ABC (UFABC) at the request of the Public Prosecutor, analysed the assumptions and conclusions of the official technical justification and identified the absence of scientific rigour. It presented elementary mistakes that resulted from an analysis based on a single performance variable—in this case, the number of cycles in each school—ignoring other elements widely documented in the educational field literature and that affect the results in external evaluations, such as the socioeconomic level of the students, the working conditions of the teachers, and the number of students per class.

Meanwhile, the student movement grew. For six weeks, between September and November 2015, the youth organized many street protests against the measures of reorganization, sometimes with the participation of families and teachers. There were more than 160 protests in at least 63 cities in the state. These first occupations influenced a large number of processes of struggle for public education in Brazil, with the occupation of thousands of schools in most Brazilian states (Costa & Groppo, 2018). By the end of November, the intensity of occupations increased and reached an average of eight new schools occupied per day, in a mobilization that attracted the attention of millions of people (Campos, et al., 2016). Unsurprisingly, the student movement triggered a forceful backlash from the government:

> The reaction of the state government came soon enough, with intense mobilization of its judicial and police apparatus. The official declarations regarding the movement and the first judicial decision—which granted the repossession [of schools] on the night of November 12—indicated a common perspective concerning youth activism: Apeoesp [a teachers' union] would have been responsible for organizing and mobilizing students for occupations. This reading denotes the ambiguity in the socially established ways of treating youth activism: when young people do not mobilize, they are accused of being apathetic and individualistic; when they demonstrate, are accused of being manipulated by unions or parties (Corti, Corrochano, & Silva, 2016, pp. 1169).

The expansion of the student mobilization was able to alter the position of the judiciary in the analysis of the repossession actions proposed by the government. If the judges granted the eviction order at the outset, using the jurisprudence applicable to common possessory conflicts, the student resistance forced them to change their understanding: judges began to consider and decide in favour of the right to demonstrate, admitting the argument that students did not aim to take state property—the schools—but to resist a measure considered unfair and authoritarian (Tavolari, Lessa, Medeiros, Melo, & Januário, 2018). Therefore, the very right to demonstrate had hitherto been a crucial point of litigation.

According to Campos et al. (2016), one of the main characteristics of the mobilization was its heterogeneity: each school presented its own political dynamics. Secondaries received support and solidarity from different political groups—students, unions, partisan or popular movements—but they maintained the autonomous position throughout the whole process of mobilization. This autonomy, attention to public space and creativity in methods of struggle dismantled, at least in the first weeks, the apparatus of repression and enabled the movement to win the sympathy of broad social sectors. Measures taken by the students were determinant in this sense, such as occupying part of the hours previously

assigned to classes with study activities, lectures, debates, and public classes, collaborative food production and cleaning, and conservation activities of school buildings (Campos et al., 2016; Corti et al., 2016; Costa & Groppo, 2018). This helped to mobilize the sympathy of public opinion in favour of the students and against the excessive police violence recorded on the streets of large cities, especially in São Paulo.

The movement also countered the government's assumption that students would reflect a sense of non-belonging and even contempt towards the school and teachers. Instead, despite the precarious conditions of teaching and work in schools, the students maintained a positive relationship with the school and teachers (Campos et al., 2016). The prolonged occupation of the schools' space nourished with innovative significance the very meaning of what is public at schools. The resistance to the authoritarian and bureaucratic policy of the state government showed to the population that the school is not owned by the government on duty. If the state is responsible for ensuring adequate conditions for the functioning of schools, their quality also depends on their appropriation by the public, by teachers, students, families, and school communities. Occupations have shown that each school can be a unique experience, although focused on some common social goals.

Clean-up efforts and care for the maintenance and conservation of public assets contributed to a vision of the school as a space that is for students "by right." The contrast between spaces destined for all and the spaces restricted to the management, to which the students hardly had access in the school routine, raised questions about the management pattern in the state schools, the lack of transparency, and the lack of democratic and participatory management. They also claimed the existence of independent student unions, regular meetings of School Boards and Parent-Teachers' Associations (APM) for decision-making, as well as new channels for participation in school management, as indicated by the sources—students' reports and testimonies, photos and filmography of the events (Campos et al., 2016).

The occupations, at least in their first cycle, had significant victories. Through the school occupations in São Paulo, the main managerial education reform initiatives proposed in 2015 were defeated or postponed. The largest victory occurred on 4 December 2015, in São Paulo, Brazil's most populous state. An embarrassed governor, Geraldo Alckmin, in his fourth term and one of the leading cadres to apply for the Presidency of the Republic in 2018, announced the revokation of the school reorganization measures to the press (São Paulo, 2015), recognizing the defeat imposed by the occupations and the dozens direct actions of blocking streets and avenues. The success of the movement in São Paulo was almost immediately reproduced in the State of Goiás, in the Brazilian Midwest, where school occupations were instrumental in resisting the government-led pilot privatization of public schools. The goal was to transfer, in 2016 and 2017, hundreds of state public schools for the administration of private social organizations, which would directly hire all administrative staff and up to 80% of teachers without public competition; therefore, without tenure (Ximenes et al., 2018).

Victorious in their purpose of political resistance, the movements and tactics of struggle of the Brazilian students exploded as a reaction to authoritarian educational measures, not being:

> [A] traditional negotiation along institutionalized paths or proposing an offensive struggle (to immediately claim "zero tariff" or "quality public education"), but to

stop government measures and break their technocratic discourse. (Januário, Campos, Medeiros, & Ribeiro, 2016).

From the earliest days of occupation, a broad and diversified agenda emerged from the experience of students and their interaction with educational movements. In the occupation movements that took place during those years, 'negative' and resistance purposes mixed with 'positive' purposes, and patterns of mobilization were diversified. Examples can be found in the school occupations in the states of Rio de Janeiro, Rio Grande do Sul, Ceará and in a new cycle of occupations in São Paulo, which occurred in 2016 (Ximenes et al., 2018).

THE PUBLIC-SCHOOL AND UNIVERSITY NETWORK

On 3 December 2015, in a public hearing of the Public Ministry (the Public Prosecutor's Office, MP-SP) and the Public Defender's Office of the State of São Paulo, a group of professors and researchers from several discipline areas mobilized to contribute to the analysis of educational policies and to support the student resistance movement. The first study, published in early 2016, analysed the consequences of the reorganization and its suspension on the public-school system. Prior to this, even during occupations, the study by Pó et al. (2015) had been the first document to expose arguments against the government and its incipient support of school reorganization. Thus, the germ of what was to become the Public-School and University Network (*Rede Escola Pública e Universidade*, REPU) was launched.

REPU was created with the aim of producing research that could debunk the government's justifications for the schools' reorganization proposal and, thus, strengthen the students' movement. Since then, REPU has been dedicated to producing studies, research, and interventions aimed at expanding and advancing the debate on the quality of education in the state education system, in line with the major issues of national education. The participants share the understanding that the knowledge produced at the university should be integrated into the movement of society, and continuously dialoguing with it. Thus, in order for this knowledge to have some influence on political action and social struggle, it is necessary to reduce the traditional gap between the timing of the research production and the timing in which political struggles unfold.

The first meeting of REPU was held in February 2016 and sought to discuss and shape expectations. Together, the participants of the REPU defined that the group's priority task would be to systematize the available knowledge, to identify gaps, and to contribute to movements and public opinion (also by the media), establishing a qualified debate with the student and teacher movements, the Public Ministry, the media, education movements, and the government. Currently the network has monthly work meetings which are open and have the participation of professors of universities and public schools. The network has also held larger scientific and mobilization-oriented meetings. These have been spaces for the exchange of impressions, experiences, formulation of hypotheses, data exposition, research reports, and have enhanced the understanding of the processes in which educational policies designed outside of school contexts materialize. These meetings provided materials for the elaboration of numerous investigations within REPU, built in partnership with research groups in the universities and with the participation of teachers of the state public schools. Published as scientific

articles, several REPU studies were pre-released in the form of technical notes, press articles, and folders that circulated in schools and teacher unions.

The strategies for the dissemination of studies and research are a permanent challenge for the REPU. Particularly, the acceleration of the research timing cannot sacrifice methodological rigour in the production of results, given the purpose of such results to influence concrete political struggles in schools. The participation of people from different fields of knowledge in REPU contributes to reducing the time of accomplishment of larger qualitative and quantitative studies.

Mirroring the secondary school students that rebelled against the reorganization in 2015 and are currently organized against the reform of secondary teaching, REPU also diversified its research and strategies. Another of REPU's permanent challenges in the production of research is to access public data (Cássio & Stoco, 2017; Travitzki & Cássio, 2017) so that it can analyse trends rather than only react to government policy, and, thus, together with movements for public education, build proposals that are increasingly collective and rooted in school communities and practices. In this sense, the decision on a particular strategy to advertise the product of our research means much more than a timely decision on how best to publicize them to reach the public. Here we find one of the most important tensions in the internal debates of REPU: do we want to produce educational research for social struggles or with social struggles? In other words, it is a question of identifying topics and approaches to research in the educational struggles, returning research results to movements and to the academic community at the end or during the process. At the same time, it is a question of mobilizing the instruments and the academic discourse to propose guidelines of action with the movements.

EDUCATIONAL RESEARCH IN MOTION: THREE SELECTED EXAMPLES

There is an important and common trait among the participants of REPU, which probably answers to its constant relationship with the reality of public schools: all have, in their professional trajectory, experienced the public-school that today we seek to understand through research. We were students trained in basic education in public schools, we were teachers in these school systems, and we participated in trade unions and social movements. Many of us now work in teacher training courses, mentoring future or current educators in undergraduate and graduate courses. Others continue to work in basic education in public schools. Largely, our professional trajectories accumulate one or more of these elements, wrought in the concreteness of social struggles for public education, free of charge and with quality. This individual characteristic generates a collective feeling that it is not sufficient to produce high quality research with delivery times that are almost unattainable amid the routine of university work. It is also necessary to fight alongside students, teachers, families and school communities. The different strategies adopted for the dissemination of REPU studies clearly reflect this tension.

As a first example, the technical note on school reorganization (REPU, 2016) was publicized at a press conference on 28 June 2016. The conflict and doubts about a possible veiled continuation of the school reorganization process, which had been forbidden by the courts, led us to decide on this form of broadcasting of the technical note. In summary, the note pointed to the inconsistency of the information provided by the state regarding the data that had justified the reorganization attempt, which was later suspended because of the students' mobilization. In fact, as shown, the alleged demographic reduction was

not compatible with the proposal of massive closure of classrooms and there was a deliberate increase in the number of students per class, causing damages to the functioning of schools. Finally, the REPU study showed that schools that would be extinguished by the end of 2015 had a greater number of classes and shifts eliminated in 2016, which could represent an intention to phase out these school units, a veiled reorganization (REPU, 2016). In the five days that followed the press conference, 21 articles were published in the Brazilian press, half of them in outlets of national circulation. Responding to the journalists, SEE-SP stated that the thesis of the study was absurd, without pointing out any methodological inconsistencies. From the point of view of publicizing and qualifying the public debate, the strategy adopted was a success; REPU became a well-known name, searchable in Google. From the point of view of an effective contribution to the fronts of struggle in schools, many internal doubts remained.

The second example is the dissemination of the first results of the research on the Integral Teaching Program (PEI) (Girotto & Cássio, 2018), made in an open meeting on 21 October 2017, the objective of which was to define strategies for propagating the results in schools. The study demonstrated that the aforementioned government policy generated stark socio-spatial and educational inequalities in the school system. Based on the evaluation that the previous press conference had not produced the expected results in schools, the idea of convening another conference would only be carried out after conducting a basic work of research dissemination within unions, students, and social movements. It was decided to edit an illustrated brochure containing a condensed version of the study results for circulation in schools. The brochure was widely distributed through the REPU communication channels but did not generate the immediate response that had been obtained in the process of disseminating the technical note on the school reorganization policy. Because the PEI is an educational policy that began in 2012 and is gradually implemented, the announcement of the study did not find a large public demand at that time. However, the progressive implementation of the policy, with the expected effects of generating educational inequalities, generated demands for the dissemination of these results in schools as the PEI is being implemented.

Our third example is the performance of the REPU against the attempt to implement a Social Impact Bond (SIB) in the São Paulo state public-school system, an unprecedented public-private partnership modality in Brazil. As in the case of the reorganization, the implementation of the SIB was published in the newspapers. The first movement of REPU was to produce a press article (Ximenes, Cássio, Carneiro, & Adrião, 2017) on 29 November 2017, questioning the essential assumptions of the SIB—ethical, political, administrative, and legal—from the document released by the government (SEE-SP, 2017a). We then made an official request for information to the government, obtaining the administrative process (SEE-SP, 2017b) that served as the basis for the elaboration of a second illustrated brochure, whose main circulation occurred in the sub-headquarters of the Teachers' Union of Official Teaching in the State of São Paulo (Apeoesp), whose schools were directly involved with the implementation of that policy. This was only possible because the schools' list was included in the administrative process. The result, from several meetings in the trade union sub-headquarters with researchers from REPU, was that numerous schools reconsidered the decision to join the project. The proximity of the electoral period in 2018 and the risk of political erosion for the presidential candidacy of Alckmin led the government to suspend the implementation of the SIB in

2018. With a clear incidence of REPU's work, the fight against SIB in schools resulted in a concrete, even if partial, political victory.

Looking at the three examples in perspective, we see that the accumulated experience has modified the strategies and actions of REPU. In the case of the SIB, the initial step was to establish a point of dissent in the press, which bears similarities to the strategy of dissemination of the study on school reorganization in 2016. Likewise, the experience of producing printed materials for dissemination to schools and unions, with the advantage, in this case, that the SIB was an educational policy with punctual and abrupt implementation, such as school reorganization. The clamour for debates about the SIB in the affected schools sealed the success of the strategy to bring the REPU's investigations closer to the school communities.

In this last example, it is unclear whether the study was conducted for social struggles or with them, since a good part of the research (Cássio, Goulart, & Ximenes, 2018) was produced during the process of struggle against the policy within schools and teacher unions via *WhatsApp* groups and in the delivery of leaflets in schools. It was with the experience of the SIB that we perceived the formation of a collaborative network in which it was no longer possible to differentiate research subjects and researchers. Clearly, here, political action imposed the timing of the investigation and put us into action. The great receptivity of the SIB study in schools also served as a measure of the diffusion of our previous work. Many people already knew the REPU productions about school reorganization and the PEI, although we ourselves did not know the reach of these studies.

Although the investigations of REPU are not properly at the service of the movements, it is through the strong interaction with them that one can pick up some clues of the governmental action in the dynamics of the educational policy. The following indications have `guided us: to know the mundane practice of politics in the daily life of schools and in the subjects' resistance; to construct powerful explanations and solid arguments; and to establish dialogues with various sectors interested in education. More than building bridges between the university and schools for the dissemination of socially relevant research results, the accumulation of experiences of the REPU has led us to increasingly produce (co)adjuvant knowledge in the political struggles of basic education—educational research as social struggle.

CURRENT CHALLENGES

The uprising of the secondaries in São Paulo is related to a type of collective action that, although recent, finds support in other movements of this century, especially those of anti-neoliberal and anti-capitalist character that question the supremacy of the market, its institutions and the limited action of progressive governments. Its forms of action and its dynamics of organization are constantly changing, inspired by the autonomist repertoire: self-organization, horizontality. and spontaneity in action.

No social movement had expressed as much power of mobilization, rupture, and resistance in Brazil as school occupations. The marks of the period are now rooted in the debates of educational policies in Brazil, whether in the attempts of appropriation of the student uprising and de-characterization of its agenda by business movements that sponsored the recent curricular reforms—in particular the reform of secondary teaching (Bill no. 13.415/2017)—or aggravation of other clashes in the educational field, with the

change of scale and the nationalization of state repression against students after 2015 (Tavolari, Lessa, Medeiros, Melo, & Januário, 2018; Ximenes et al., 2018).

The new movements to resist authoritarian educational reforms and to defend a democratic education demanded the construction of new intelligibilities to better understand political and policy processes. Without a genuine effort to operate in new logics, it is not possible to think of strengthening the mobilization for a democratic education in Brazil today in which an accelerated process of managerial reform and privatization imposes a new and decisive phase of challenges for the defence of the public school. Three current regressive governmental measures are worthy of attention.

The first is the *Constitutional Amendment no. 95/2016*, which creates the "public spending ceiling." It prohibits the expansion of public investments for 20 years and, in the case of education, suspends for the same period the most elementary constitutional guarantee of public funding for education in Brazil: the federal minimum spending of 18% of tax revenue on education (Pinto, 2016). The second is the reform of secondary education, a measure of elitist and reactionary bias that reintroduces official segregation in the basic education curriculum in order to contain the demand for expanded access to higher education through the differentiation between a propaedeutic and a technical and vocational training for the majority of students (Cunha, 2017). The third is the recent approval of the Brazilian National Common Core Standards, which standardizes curriculum objectives. Such standardization, in turn, goes against the demands of students for greater democratic participation in the definition of curriculum within each school as a component of the democratic management of education (Cássio, 2018; Lima, 2013).

In the face of counter-reforms that advance the neoliberal elements in education, we see a concomitant process of building resistance struggles that is part of the development of multiple influences among movements, protests, and activism, and which have energized the struggle for public education in Brazil in recent years. Articulated within the movement as a whole, REPU is itself a knot, part of a process of building social struggles that attempts new ways of confronting governments and the capital in education, in actions carried out outside of institutionality and based on horizontal relationships and the autonomist repertoire, disruptive of the already consolidated propositional spaces.

The dichotomy of educational research for social struggles/with social struggles is being supplanted as channels of dialogue and exchange are built based on trust and with convergent objectives; being the main one to fight policies that intensify educational inequalities. The work in networks, not based on institutions, entities or constituted groups but on agents emerged from the immediate struggle—and combined with others already established—expands the possibility of political struggles in which the interaction and the autonomy overlap with the hierarchy and the flow of actions. In this movement, REPU presents itself as a unique space for the production of knowledge and for political action in the educational struggles in Brazil, with the desirable side effect of increasing the social relevance of our public universities.

Acknowledgments

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Child workers and inclusive education in Indonesia

Robertus Raga Djone
Leading to Improve Future Teachers (LIFT) Foundation, Indonesia: *rdjone@lift.or.id*
Anne Suryani
Melbourne Graduate School of Education, The University of Melbourne, Australia:
anne.suryani@unimelb.edu.au

Since Indonesia's transition to democracy in 1998, wealth inequality has increased significantly with a dramatic rise in the wealth of the rich and stagnating income growth among poorer citizens. Similar to many developing countries, the issue of child workers in Indonesia is a critical problem. The 2015 National Labour Force Survey *recorded 1.65 million children aged 15–17 involved in child work in Indonesia. Efforts to encourage the participation of child workers in schooling has been greatly promoted but few studies have investigated the issue of the impact of child work on student learning outcomes. Children involved in work are likely to be left behind in educational achievement. Their disadvantaged social, cultural, and economic backgrounds lead to physical and psychosocial vulnerabilities, which requires democratic-classroom approaches, characterized by child-centred settings and teachers familiar with students' diverse learning abilities. This paper presents findings from a study investigating Indonesian teachers' perspectives on the impacts of work on student learning outcomes and how they implement diverse teaching and learning styles when educating child workers. This study highlighted the lack of school and teacher readiness in managing child workers' diverse needs and the absence of teachers' involvement in developing policies for child worker education that may all lead to child workers not achieving learning outcomes. This study outcomes also support democratic-style classroom approaches in making education a reliable investment for child workers. This study provides recommendations for improved policies and practices for the local government and schools in the East Nusa Tenggara province.*

Keywords: Child work; inclusive education; student learning; Indonesian education

INTRODUCTION

There are three aspects to consider when conceptualizing child work: the child, labour, and work (Bhat, 2010). The *United Nations Convention of the Rights of the Child* (UNICEF, n.d.) defines "a child as a person below the age of 18" (article 1) and states that children should be "protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development" (article 32). The International Labour Organization (ILO) standard, divides child work

into five types: hazardous work; nonhazardous work; light work; work excluded from minimum age regulations, including household work; and work related to education (ILO, 2004, p. 17). The ILO defines child labour as "all economically active children below the age of 12, all children aged between 12 and 14 working more than 14 hours a week, and all children below the age of 18 in the worst forms of child labour" (Kim, 2009, p. 30).

The accentuated differences between child labour and child work relate to the age and type of work the child performs. The Indonesian constitution prohibits employment of children (article 68 of *Labour Law Number 13 2003*), although the regulation includes a number of exemptions: children aged 13–15 years are allowed to be employed for a maximum of three hours a day in types of work that do not hinder physical, mental, and social development and for which they have the legal permission of parents or guardians, and in work that does not interfere with school times and does not present a hazard to safety and health (article 69 of *Labour Law 2003*).

The definition of child work used in this paper is based on minimum age and type of work, drawing on both the ILO and Indonesian labour laws: any work undertaken by any child below the age of 18, including most unconditional worst forms of work, hazardous work, nonhazardous work, light work, work excluded from minimum age regulations including household work and work related to education (ILO, 2004, p. 17). Child workers fall into two categories:

1. All economically active children below the age of 12, all children aged between 12 and 14 working more than 14 hours a week, and all children below the age of 18 in the worst forms of child labour (Kim, 2009, p. 30).
2. Children aged 13–15 who are allowed to work according to article 69 of *Labour Law Number 13 2003*. The allowed work based on this regulation includes light work, work that does not hinder physical, mental, and social development, paid-work with a maximum of three hours a day, and work that does not interfere with school time or present a hazard to health and safety.

The use of the term child work in this study is more accurately compared to child labour as researchers cannot accurately determine whether all school-aged children in this study were involved in child labour, but they are all undeniably classified as child workers.

THE CONTEXT

Despite the Indonesian Ministry of Manpower having developed strategies to eliminate child workers by 2022 and statistical records showed a decrease in the number of children aged 10–14 participating in labour from 7.1% in 2002 to 5.2% in 2007 (Kis-Katos & Schulze, 2011), there were still 1.65 million children aged 5–17 who were still working, and 1.76 million child workers were categorized as child workers in 2009 (Statistics Indonesia and ILO, 2009). As found in many studies, child work has been closely associated with poverty (Bhat, 2010; Edmonds & Pavcnik, 2005; Holgado et al., 2014) and it is evident that the presence of child workers in Indonesia is aggravated by poverty (ILO, 2013). The earnings of a child worker may support family income (Bhat, 2010; Holgado et al., 2014) and a family may rely on child work (Bhat, 2010).

However, poverty is not the sole factor influencing child work (Kim, 2009). Other contributors include: lack of opportunity in the job market, social and economic discrimination, and a lack of access to information (Kulttz, 2015). A recent study by

Holgado et al. (2014) proposed that child work has larger dimensions than economic aspects alone. Economic factors, such as family income, do influence the decision of parents to send children to work, but family and cultural values also play important roles in child work. Parents may value child work as a process for learning responsibility and child work may be culturally considered a child's contribution to their family (Holgado et al., 2014).

In the Indonesian context, a distrust of education also contributes to child labour (ILO, 2013). The absence of relevant quality education might contribute to repeated cases of child work. The provision of relevant education characterized by democratic approaches (ILO, 2004) in the frame of inclusive education is seen as the basic response to the issue of child work in Indonesia (ILO, 2013).

INCLUSIVE EDUCATION AS AN ALTERNATIVE APPROACH

Studies have shown child workers experience physical, psychological, and psychosocial disruptions (Holgado et al., 2014; ILO 2004; Woodhead, 2004,), including impedance of child workers' learning outcomes (Aziz and Iskandar 2013; Bhat, 2010; Holgado et al.; 2014; Hoop & Rosati, 2012; Kluttz, 2015; Raj, Sen, Annigery, Kulkarni, & Revankar 2015; Zabaleta, 2011) as their particular circumstances mean they have special educational needs. The *Salamanca Statement* (1994) on special needs education states that "every child has unique characteristics, interests, abilities and learning needs" and that "education systems should be designed, and educational programs implemented to take into account the wide diversity of these characteristics and needs." The Indonesian constitution (*Law 20 2003*) clearly states that every citizen has an equal right to quality education and that every individual who has physical, emotional, mental, intellectual, and/or social disability has a right to be provided with special education. It describes special education as that which is provided to learners who endure difficulties in their learning process due to their distinctive physical, emotional, mental, social, and/or intelligence potential and gifted condition (*Law 20 2003*, article 1). Students from isolated areas or are impacted by natural disasters and who are economically disadvantaged are also entitled to special education (*Law 20 2003*, article 2).

Accordingly, a strategic educational approach that is most relevant to child workers is inclusive education, where students with diverse characteristics and learning needs can build effective social skills and be provided with quality education (Adams, Harris, & Jones 2016). Staub and Peck (1995) outline the advantages of inclusive education as increasing the self-dignity, self-conception, social consciousness, and social relationships of students. Allen and Cowdery (2005) state that it is through inclusive education that the basic rights of students in receiving education regardless of their competences and disorders is upheld, thus ensuring educational equality. They also maintain that inclusive education provides students of all abilities with the ability to gain a high level of education. Additionally, Terzi (2014) suggests that inclusive education can be perceived as the practice of fairness, protection, engagement, and guardianship in the classroom.

However, there are mixed opinions regarding the appropriate model of inclusive education. In the Western context, inclusive education features locating children with special needs in special schools (Terzi, 2014). Supporters of this idea argue that combining all children in the one classroom, regardless of psychological and physical background, may lead to the exclusion of those with certain physical and psychological

disorders because they may be engaged physically, but not emotionally (Terzi, 2014). While the opponents of the idea to relocate children with special needs maintain that it is the primacy of inclusive education where learning features the flexibility and ability to acknowledge the diversity (Terzi, 2014). The leading policy to support the idea of integrating children with special needs into regular schools is the *Salamanca Statement* (1994), which states that children with special educational needs must "have access to regular schools which should accommodate them within a child-centred pedagogy capable of meeting these needs." The challenge is ensuring teachers have the resources and capacities to ensure that all children, including those with special needs, have the equal right to quality education. The presence of teachers who have a special skill to design a lesson plan that is compatible with children with diverse needs is essential (Buli-Holmberg & Jeyaprathaban, 2016). It is also important to encourage collaboration between educators who have a specialization in children with special needs, general teachers, and other multidisciplinary teachers to develop a modified curriculum (Buli-Holmberg & Jeyaprathaban, 2016).

There are 1.6 million children with special needs in Indonesia, but only 18% have access to inclusive education (Ministry of Education and Culture (MoEC), 2017). The government has built new special schools and developed existing inclusive schools across the region to provide access to education for these children. However, there are challenges to implementing inclusive education in Indonesia, including insufficient school infrastructure, lack of community knowledge and parents' awareness to send special needs children to inclusive schools (MoEC, 2017; Sunardi et al., 2011).

The lack of preparation in the education system and its practices when implementing inclusive education is another barrier identified by Sunardi, Yusuf, Gunarhadi, Priyono, & Yeager (2011, p. 9), encompassing school management, curriculum, assessment and evaluation, and teaching. A deficiency in the capability of school staff in developing inclusive programs is another concern (Sunardi et al., 2011). In inclusive classroom settings, Wilkerson et al. (2013) stress that it is important to encourage students with special needs to own a sense of collaboration and social interaction, which can be achieved through asking questions, speaking, negotiating, and posing arguments. The teacher's capacity to manage children with social-emotional issues is also a prime requirement of inclusive classroom settings, including how to help children with frequent and high intensity misbehaviours, children with social interaction problems, and children who have poor self-direction (Friend & Bursuck, 2006).

Teachers play an important role in eliminating child work (ILO, 2013). The vulnerability of child workers arising from their background of poverty (Edmonds & Pavcnik, 2005), psychological disturbance (Woodhead, 2004), and generalized psychological problems (ILO 2004, Heady, 2002) demands more inclusive and democratic approaches in teaching and learning (ILO, 2004). As a teacher, competences in dealing with diverse characteristics are essential (Voss, Kunter, & Baumert, 2011). Further, Kluttz (2015) argues there is a need for child workers to have effective social skills, which is the leading benefit of inclusive education. Kluttz suggests that education provided to child workers should encourage them to think critically, be innovative, able to solve problems, and interact with other people. Child workers' poor self-concept (Woodhead, 2004) can be addressed through inclusive education, which promotes self-dignity and self-conception (Staub et al., 1995). In the context of the Indonesian government's program of sending child workers back to school and eliminating child workers in the country by 2022,

understanding the role of teachers' perspectives could contribute to improved policies and practices with respect of child workers' equal opportunity to quality education.

In the context of the above discussion, this study addresses two questions:

1. What are teachers' perspectives of child work and the impacts of working on children's learning activities in five Indonesian junior secondary schools?
2. What are teachers' perspectives on existing policies and practices to improve child workers' learning?

To address the research questions, this paper first outlines a review of child workers and their learning activities as well as child work policies in Indonesia. It subsequently discusses the methodology employed to generate the findings, followed by further discussion of how teachers might create more inclusive and democratic classrooms for child workers.

CHILD WORK AND LEARNING ACTIVITIES

Child workers constitute significant numbers of enrolled school-aged children (Bhat, 2010) and have more absences than nonworking children (Zabaleta, 2011). In particular, children who work in the morning may find that work clashes with the school timetable (Holgado et al., 2014). However, Kluttz (2015), and Hoop and Rosati (2012) suggest a less significant relationship between working and school attendance. In addition, Aziz and Iskandar (2013) propose that children who have part-time work while attending school do not find it difficult to organise their time for work and school, although some have problems with attendance. Thus, despite some studies indicating child work may influence learning outcomes (Holgado et al., 2014, Psacharopoulos, 1997; Ray & Lancaster, 2005), it might be insufficient to claim working is always detrimental to school attendance.

In many developing countries, the government provides children with tangible support, such as money transfers and food, to aid school attendance (Hoop & Rosati, 2012). The idea of providing families with cash to send children to school rather than work was implemented to offset the economic loss of children leaving work to attend school (Dessy & Knowles, 2007). While this money transfer might increase attendance, schools must also create a relevant and quality education so that child workers continue to consistently attend school. Bath (2010) and Kluttz (2015) maintain that quality education can retain children in school, and irrelevant and poor-quality education acts to the detriment of child work (Holgado et al., 2014; ILO, 2013). The need for quality education for child workers is also vital in raising the trust of child workers' parents in education as an investment (Kluttz, 2015). Parents may opt to send their children to work rather than to school when the perceived benefits of work outweigh those of school (Edmonds & Pavcnik, 2005; Kluttz 2015). Thus, a model of education that equips child workers with extended skills, and relevant and usable capabilities (Kluttz, 2015) would be most compatible with child work.

Many studies that have examined child work and student achievement suggest that child workers have lower academic achievement than students who do not work (Holgado et al., 2014; Psacharopoulos, 1997; Ray & Lancaster, 2005). Long working hours that lead to physical exhaustion (Holgado et al., 2014), poor motivation, and psychological disturbance (Heady, 2000) disrupt child workers' educational achievement. Woodhead

(2004) proposes a number of signs of psychosocial problems child workers endure, including poor cognitive development, problems in communicating, and lack of interest and long-term orientation. However, the failure of working children to achieve learning outcomes might not always be related to the impacts of working; it could also be related to the absence of quality learning opportunities. As child workers are prone to experience psychosocial problems (Woodhead, 2004), schools need to ensure a supportive environment tailored to child workers' backgrounds. The kind of education that can encourage child workers to think critically, be innovative, solve problems, and interact with other people (Kluttz, 2015) might help address some of the psychosocial issues cited above. Further, when children combine work and education, or cease working and go to school, education needs to provide children with necessary capabilities in the job market (Aziz & Iskandar 2013; Kluttz, 2015). Otherwise, education may potentially deprive working children of opportunities to earn without offering a reliable pathway to future employment (Kluttz, 2015). As such, policymakers should consider integrating practical skills into the school curriculum (Kluttz, 2015).

Because the delivery of quality education also enhances the trust of child workers' parents (Edmonds & Pavcnik 2005; Kluttz, 2015), their involvement in their children's education is essential. Epstein (2013) suggests that collaboration between educators and families might be hampered due to the heterogeneous nature of intellectual, social, economic, and cultural backgrounds, and literacy levels (Epstein, 2013). Contreras (2007) proposes the enhancement of parental resources by providing education and training programs, including literacy skills, that would be beneficial for the future success of a child. Education approaches should encompass child workers' parents' involvement. Regular communication with parents to discuss children's learning progress and behavioural issues and home visits are examples of parental involvement (Miller, Lines, Sullivan, & Hermanutz, 2013).

GOVERNMENT POLICIES

Since 1992, the ILO has collaborated with the Indonesian government to implement the *International Program on the Elimination of Child Labour*, which aims to strengthen the capacity of ILO country members to reduce child labour, especially for children involved in the worst forms of work. There were 3–4 million children aged 13–14 in Indonesia involved in child labour in 1993, and only the Philippines and Nepal in the Asia–Pacific region were worse than Indonesia. The government of Indonesia has since produced a number of policies, capacity building programs, and direct interventions to combat child labour (ILO, 2013). The policy development included: the ratification of *ILO Convention No. 139*, regarding minimum working age in 1999; *Convention No. 182*, regarding the elimination of the worst forms of work in 2000; and adoption of the *ILO 182* convention in the development of *National Labour Law 2003*. From 2002 to 2006, the Indonesian government had prevented 34,695 children from engaging in the worst forms of work and freed 3,398 children from the worst forms of work (ILO, 2013).

Despite the Indonesian government's efforts to prevent child workers, access to education remains a significant problem. A Human Rights Watch report (2009) confirmed that child workers have very limited access to education because they cannot afford to pay for their school fees. To address this issue, in 2005, the government launched the School Operational Assistance Fund Program, the *SMP Satu Atap* (One-Roof Junior Secondary School) and *Bantuan Siswa Miskin* (Cash Transfer for Poor Students). In 2007, the

government also launched the Hope for Families Program, *Program Keluarga Harapan* (PKH), adopted from Conditional Cash Transfer, which has been implemented in developing countries like Bolsa Familia in Brazil and Progresso in Mexico (ILO, 2013) to combat poverty. This program supports poor families with a regular cash distribution in order for families to send children to school until they finish nine years of basic education. If families fail to send children to school, the cash transfer will stop. In 2008, the PKH program was combined with the Reduction of Child Worker program, termed *Pengurangan Pekerja Anak* (PPA). The PPA-PKH was an endeavour of the Ministry of Manpower and Transmigration to reduce child workers, particularly children involved in the worst forms of work (PPA-PKH, 2014). In this program, working children from very poor families who drop out of school are sent back to school. In 2014, the program had a national target of sending 15,000 children back to schools in 100 districts across Indonesia. The priority group of children targeted were working children aged 9–17 years, particularly those engaged in the worst forms of work, including hazardous and hard labour, and those who had dropped out of school. Before being sent back to school, children were placed in a temporary shelter and attended a series of academic and psychological preparation activities prior to returning to school. Awareness of child rights, basic reading and math skills, citizenship, leadership, communication skills, sports, and religion subjects were provided to these children during a 30-day school preparation program.

As a result, the Ministry of Manpower claimed that, in the period 2008–2015, the program had returned 80,555 child workers to school (MoEC, 2017). It was found that the attendance rate for children involved in the PKH program was around 80% to 90%. This high attendance rate was influenced by the conditions of this program that required children to attend more than 80% of the year, otherwise the amount of money received was reduced. Cash transferred to children was Rp. 1 million per year, distributed quarterly. If the children did not reach the monthly attendance target, their money was cut to Rp. 50,000 per month.

While the government's Conditional Cash Transfer programs has significantly contributed to child workers' attendance, quality participation in learning activities and the relevant education they experience would contribute more to their learning success. Rather than attendance, it is the learning process the child workers undergo that would more significantly explain the consequences of child labour (Zabaleta, 2011) and this affects child workers' learning success.

METHODOLOGY

Semi-structured interviews were employed to capture teachers' perspectives of child workers and their learning because it provides more freedom for participants to express their perspectives (Merriam, 2009). Data were collected in July 2015 in Kupang, a capital city of East Nusa Tenggara province, with approximately 23,103 child workers as estimated by the East Nusa Tenggara Child Protection Board (Tempo, 2010). Its status as the capital and biggest city in the province makes Kupang a target for jobseekers, particularly from districts located nearby such as South Timor Tengah (Timor Tengah Selatan) and North Timor Tengah (Timor Tengah Utara). In some cases, children from those districts relocate and live with relatives to attend school in the city because there is limited or no access to schooling in rural areas. In the city, rural children engage in work to support themselves and/or recompense relatives for their board and lodging.

Prior to data collection, ethics approval was obtained from The University of Adelaide. Before each interview was conducted, permission was sought from participants and each was asked to complete a consent form. All participants selected for the study signed the consent form indicating they were willing to participate, have their interview recorded and were free to withdraw from the study at any time. Four of the five public junior high schools, known as *Sekolah Menengah Pertama Negeri* (SMPN), were selected according to recommendations of the Kupang Department of Manpower and Transmigration, whose program of sending child workers back to school is relevant to this study. Junior high schools were selected because they have students aged 13–15 years, the ages of which nonhazardous work and light work are allowed. The four public schools recommended by the Department were SMPN 5, SMPN 8, SMPN 9 and SMPN 11. Another school, SMPN 19, was also selected by the researchers because of its location in the port area where many children work part-time as porters.

The selection for interviews were limited to school principals and one to two teachers in each of the five schools who fulfilled the following criteria: an experienced teacher, a class teacher and/or have experiences assisting with working students. There were nine teachers and five school principals overall from the selected schools who voluntarily participated in the study.

The study findings were organized into four key themes: types of work, the impact of child work on schooling, current policies to support child workers' education, and teaching practices applicable to child workers. The four key themes were broken down from the two research themes: teachers' perspectives on child workers and the effects of working on schooling were used to interpret the impact of child work on education, and their views of teaching practices and policies formed the basis for the types of model educational policies and practices that are relevant to child workers.

TYPES OF WORK

In this study, working more than 15 hours a week was classified as high intensity. Selling newspapers and cakes were the most intensive forms of child work, as children sold newspapers until late evening and walked long distances to sell cakes. Children could also be involved in making cakes during the night, which increased the intensity of their work. Selling vegetables also required children to walk long distances, although some families sold vegetables from the family house.

Many child workers in Kupang were from other regions, such as Soe and Kefa which are located 109–192 km or 2–4 hours' drive away. These children sought greater access to education as the large distance between their homes and secondary schools prevented them from attending school. They undertook domestic work, such as cooking, cleaning, and washing to repay their food and accommodation costs to hosts which were considered an obligation and a tradition, as described below:

> Children have to work as they live in other people's houses. It is not the right practice for them to just sit and eat. Our tradition is that children have to do household tasks; they must wake up earlier, clean the house, wash dishes. (Teacher 2)

Generally, poor background, migration due to the lack of education infrastructure in the child workers' places of origin and local values towards working were perceived to be the cause of child work. A majority of teachers also linked child work with economic-

related activities. Reasons that a family engaged children in child work included adults undertaking low paid non-permanent work or a large number of family members to support. In such cases, money earned by children was used to support family needs.

> The children come from poor families and they need to work to get money to pay for public transport from home to school. Some children work as shoe makers and sell their home-made cakes from school to school. (Teacher 8)

> Their parents back home told them to work to get pocket money and to pay for their own transport since they live with other people in Kupang. (Teacher 10)

THE IMPACT OF WORK ON SCHOOLING

Most participants highlighted particular characteristics of working children, such as daydreaming, losing concentration, and feeling sleepy, when discussing school interactions of child workers.

> Due to their tiredness of selling cake until night, it is difficult for them to concentrate in their learning ... they have spent much time for working, when will they have time to read books? (Teacher 7)

> The child got sleepy in the class, perhaps due to the tiredness of long walk to sell cakes. (Teacher 1)

It was quite obvious that there is a direct relationship between intensity of work, measured by physical activities and length of work and child workers' engagement in learning activities. Physically demanding work undertaken in long hours proved to be detrimental to child workers' active involvement in the classroom. For example, child workers would spend up to three to four hours per day to walk long distances to sell cakes or newspapers, because the more they sold, the more commission they receive.

Distinctive mature physiological characteristics due to child work also affect child workers' school interactions. One teacher noted that working children with specific characteristics, such as a more physically developed body, exhibited misbehaviour problems as they seem older and more grown up than their peers:

> This child was older when he was grouped with children from primary school and he felt ashamed because he was bigger and taller than friends of the same age. If not regulated, the child could cause trouble. (Teacher 7)

There was also an indication that older children found that school did not match with their freedom of expression and they left:

> There are two boys, aged 17-18 years old. They resigned after two weeks at school. They cut their hair, scrawled and made themselves different from other students. (Teacher 7)

Regarding school attendance, most teachers stated that child workers came to school regularly and had average attendance rates of 80%–90%. High attendance rates were influenced by external supporting policies and practices in terms of classroom policies, family support and the government cash transfer program. The findings suggest that child work did not interfere with school attendance in the five junior secondary schools in the study.

Along with the existence of external support to increase school attendance of child workers, a child's personal motivation also contributed to school attendance. This idea was derived from the case for children who came from regions outside of Kupang with

the intention of continuing their schooling. Despite living with their relatives or acquaintances and undertaking domestic chores before and after school, these children attended school consistently, as described by Teacher 1:

> They realise their condition and disadvantages; they must learn and go to school... although they are probably tired from working at home.

With regard to student achievement, some child workers had serious issues with academic achievement and were described by teachers as "weak students" or "below standard" (Teachers 1 and 8). Low academic achievement for these students was related to types and intensity of work, as stated by Teacher 1:

> He is very cognitively delayed in class because of tiredness. But he has good attendance, is polite and obedient.

When asked about learning achievements of child workers, several teachers mentioned not only academic achievement but also attitudes. For example, Teachers 4 and 7 stated that the current Indonesian curriculum, Curriculum 2013, emphasizes not only cognitive aspects but also children's attitudes and skills as a measurement of learning outcomes. In this curriculum, attitudes are measured by religious values in the form of prayer and children's social skills, including building good relationships with peers, demonstrating collaboration, honesty, and expressing ideas in discussions. In general, child work in this study did not appear to prevent child workers from eengaging in schooling. However, there were strong indicators that their education was highly disrupted by working, as noted by their tiredness, daydreaming, lack of concentration, and withdrawal from school.

COMMUNICATION WITH PARENTS

Teachers provided a number of strategies to improve learning outcomes for child workers. The most common strategy was establishing good communication with parents. Other strategies were inclusive, non-discriminatory teaching and learning, providing motivation and support, and an emphatic approach to the role of the teacher.

The participants indicated the importance of regular communication between teachers and parents. Generally, communication with parents was undertaken at the end of semester when student learning achievements were reported, as stated by Teacher 2. Issues-based meetings were implemented when teachers communicated with parents about particular academic or behaviour problems (Teacher 4), which can be conducted via face-to-face meetings and phone calls. Teacher 12 (also a school principal) stated that contacting parents was useful in overcoming child workers' common problems such as tiredness or losing concentration.

> If they are sleepy in the class, do not do their homework or coming late to school, I will call their parents and they will come. (Teacher 4)

Despite the advantages of communication with parents of working children, a potential hindrance was related to parents' educational insight. An example was provided by Teacher 7 who stated that in some cases neither children nor parents understood what the learning assessment was and how it was undertaken. From the teacher's point of view, understanding assessments were important for parents to encourage children to achieve academically. However, communication with parents did not always deal with topics of learning or technical matters. Communication between teachers and parents also included

topics on child workers' wellness and attitudes, such as physical and mental health, which influences learning success.

TEACHERS' APPROACHES TO INCLUSIVE EDUCATION

Several teachers stressed that an emphatic personal approach to child work can help motivate child workers in the classroom. This may be done by the teacher explaining that she herself had once been in the child's position and playing a flexible role not only as a teacher but also as parents in the school:

> All I can do is give advice. We give them the insight that we once were like they are now, living with other people and we studied under trees in the afternoon. They need to think that education is important for their future. (Teacher 1)

> We play a role as a mother as well. (Teacher 1)

Another approach is utilizing the school counsellor. Although it is a standard procedure for all children with behavioural problems, this was also a relevant approach given to child workers with learning disabilities as a result of working. In the classroom, learning was undertaken without discrimination, meaning that no special treatment was given to particular children regardless of their background. Teacher 7 stated that since children with advanced learning abilities and those with learning problems were combined in one class, teachers could not devote themselves to applying special approaches to a particular group of students as other students would suffer. Furthermore, academic testing did not differentiate children based on learning abilities, thus teachers were responsible for the success of all children. Teacher 1 highlighted that there was no discrimination in the classroom:

> It is the same, there is no golden child or silver child. Competing equally, whosoever learns harder, he/she achieves academic success. All children are similarly treated. (Teacher 1).

While the same treatment was provided to all children in a classroom to avoid exclusivism and strive for so-called social justice, children with particular learning problems or coming from disadvantaged backgrounds were potentially left behind. Hence, providing the same treatment to all children created injustice. Children with learning problems or special needs required additional support and particular approaches to achieve minimum learning outcomes. In this context, the same treatments did not necessarily indicate equality where all children have the same opportunity for academic success. However, as emphasised by Teacher 7, implementing specific teaching and learning approaches for children with special needs demanded far-reaching reforms including upgrading the teaching capacity.

Nevertheless, some teachers had already tried to apply particular approaches to motivate child workers in their learning. A majority of teachers agreed that providing extra encouragement to child workers (Teachers 2, 4, and 9), playing a flexible role not only as a teacher but also as parents in the school (Teachers 1 and 4), and considering children's characteristics in group-based activities in the classroom (Teacher 4), were helpful in making their learning more engaging. It is evident that without being adequately prepared to teach child workers who have since returned to school after dropping out for an extensive period of time, teachers will not be able to implement inclusive approaches.

> We treat them all in the same way and when we differentiate them school management and teachers must be really prepared. Not all teachers are capable of managing troubled children. (Teacher 8)

The need for the modifying the curriculum is also voiced by a teacher who stressed that the assessments and evaluations must also be updated if teachers apply a different, more inclusive strategy for child workers. However, the Curriculum 2013 already provides alternative assessment and evaluation systems for child workers by including affective and psychomotor skills:

> Beforehand, the common problem in public schools is that there's no differentiation in the school evaluation. The evaluation should vary based on students' ability. Now that we have the new curriculum, academic achievement is not the only aspect to be assessed but also psychomotor and affective skills. (Teacher 8)

This statement might require further investigation into whether child workers achieve less academically and have more potential in psychomotor and affective aspects, leading to the teacher believing life-skills and emotional intelligence would be more beneficial for child workers. However, the statement invites ambiguity when the teacher discriminates between academic and psychomotor and affective intelligence because the academic assessments within the Curriculum 2013 also includes cognitive, psychomotor, and affective competence. Additionally, using a ranking system as a product of academic achievement was problematic. A rank system was less meaningful if not followed up by the design of diverse learning approaches for children with different abilities. Teacher 7 proposed that a rank system should be pursued by classifying children based on learning achievement, for example, advanced, middle, and less progressed students. Children who had less progress in learning should be placed in a different class in order to be taught with different learning approaches. The current practice of mixing all children regardless of their background and abilities in one class and treating them the same meant children with learning problems were left behind. However, in order to place children according to their special needs requires substantial preparation, as indicated by Teacher 7:

> When children are differentiated, school management and teachers must be well prepared, as not all teachers have the ability to manage children with special needs.

There was only one teacher interviewed who had developed particular strategies of grouping students when dealing with child workers as a form of classroom management. The teacher said that she organized children in a way that those with attitude problems are not placed in the same group:

> Don't unite children who provoke other children to play in one group. They must be spread over different groups. (Teacher 5)

While the statement above could indicate that teachers already apply particular pedagogic approaches for child workers, it could also reveal their assumptions of child workers as misbehaving children. It seems that teachers' lack of knowledge of the complexity of child workers risks supporting a misconception of child workers as troubled children.

GOVERNMENT POLICIES

Four out of five schools involved in this study participated in the PKH. This program provides poor families with regular financial support for education, health and economic empowerment. While increasing school attendance is crucial, child workers' cognitive

and psychological background as well as school readiness must be considered before sending them back to school. One teacher, whose school was involved in PKH, argued that the program should not just place children without paying attention to the progress of the child:

> After sending these children, they (the government) think their project is accomplished while we somehow accepted these children regardless their background. We hope the relevant department can also solve the problem on these children. (Teacher 7)

This teacher shared a case where a child withdrew from the school due to not performing well in class. The provision of sufficient information regarding the background of working children helped the school prepare different approaches when dealing with learning problems.

THE IMPACT OF WORK ON SCHOOLING AND RELEVANT EDUCATIONAL POLICIES AND PRACTICES

Teachers' perspectives on child work can be summarized in three findings. First, children who are involved in high intensity work experience significant disruptions to their learning. Children included in this category are those who undertake double work or are involved in work that demands great physical fitness, such as walking long distances to sell cakes or vegetables. Tiredness and lack of time for study are some of the main factors impeding these children's learning. This validates previous studies (Chanda, 2014; Heidy, 2000; Holgado et al., 2014) which demonstrated that learning achievement is sacrificed when children combine work and schooling. Distractions (Chanda, 2014) and exhaustion (Heidy, 2000) have direct effects on child workers' education. Street child workers and child workers who left school and later returned to school are more likely to display behavioural issues.

Anker and Melkas (1996) suggest that the mismatch between school policies and curriculum and the lack of school flexibility to older child workers create further issues for their education. It seems that their different needs might be ignored when they enter or re-enter schools that are inhabited by differently aged children. For example, street child workers who are used to managing their own freedom in the street could face a tremendous difficulty when attending school as they might feel the discipline restricts their independence and self-authority (ILO, 2004). The presence of compatible school policies and practices that are tailored to child workers' psychological needs is essential when they return to school.

Second, although attendance rates should not be considered as the only measure of educational achievement, it may influence student learning and is an early indicator of future educational outcomes. This study suggests that child labour did not interfere with school attendance, which challenges a previous study that found working children are likely to have more absences than nonworking children (Zabaleta, 2011). Rather, the findings of this study agreed with Kluttz (2015) and Hoop and Rosati (2013) who proposed that child labour has an insignificant impact on school attendance. Aziz and Iskandar (2013) also suggested that children who worked part-time while schooling did not find it difficult to organise their time for work and school, although some did have problems with attendance.

The government's PPA-PKH program played a significant contribution in encouraging working children to attend school because it provided cash transfers to families in return for high school attendance. A number of studies (Dessy & Knowles, 2007; Hoop & Rosati, 2013) argued that tangible government support, such as money transfer and food, can promote school attendance for child workers. However, the physical and psychological deficiencies suffered as a result of working were clearly more disruptive to child workers' learning quality than their attendance. Zabaleta (2011) suggested that it is the learning process that child workers undergo that explains the consequences of child work rather than their presence in the classroom. Thus, judging the connection between working and academic achievement by only measuring attendance rates might be misleading.

In addition, this study found that child workers with distinctive physical and psychological characteristics require tailored education. This confirms a previous study that older child workers endure serious problems in school because of the absence of education suitable for their ages and particular cognitive, affective, and social characteristics (ILO, 2004). Holgado et al. (2014) also suggested that the failure of a school to provide quality and relevant education might lead to children leaving school to be a child worker. Therefore, along with the policy of sending child workers back to school, the government should ensure that schools are well equipped to provide relevant education to the child workers, including matching the curriculum and teachers' capacity with their students' special needs.

In considering child workers' special needs, the majority of schools share the same perspective that child workers experience difficulties with learning and engagement as a consequence of working, especially when engaged in high physical intensity work. This might indicate that teachers perceived child workers as those with special needs. However, there was a mixed perception from teachers when dealing with child workers. Some teachers were likely to support nondiscriminatory learning by providing nondifferentiation approaches to child workers. Others believed that child workers require different approaches but found that the absence of relevant policy and lack of teachers' capacity prevented them from using special approaches for child workers. These teachers suggested that child workers who experienced consistent learning problems due to distinctive cognitive and psychological challenges did not fit well in regular schools, suggesting that open junior secondary or other nonformal education and training were better options. This study found that despite some individual approaches to help child workers, such as providing motivational supports and communication with child workers' parents or guardians, there was a lack in institutional readiness to manage child workers with their distinctive needs, including lacks in school management, curriculum, teaching materials and instruction, and teacher capabilities. Taking actions to warrant institutional and individual teacher's readiness could help schools achieve the benefits of inclusive education as proposed by Allen and Cowdery (2015) and provide equal and quality education for all children regarding their abilities and disabilities as well as develop students' social skills.

CONCLUSION

Government policies support improved access to education for child workers. The combination of policies, including sending children back to school with the provision of financial aid to families through the PPA-PKH program, helped children to regularly

attend school. However, it is inadvisable to assume that attendance alone ensures a better future for child workers. It is important for schools to design and implement policies and practices to encourage child workers to achieve high academic outcomes and positive social and emotional wellbeing outcomes. It is also important for schools to shape child workers' academic orientation and motivate these children to continue their education. A failure to shape child workers' educational vision may result in a repeated cycle of child work practices across generations. The improvements in education quality and the provision of relevant education towards child workers can be a strategic investment to increase child workers' competence (Kluttz, 2015) and is of relevance to the Indonesian government's program encouraging child workers back to school and eliminate child labour in Indonesia by 2022 (ILO, 2013).

It might be useful to view the concept of inclusive education as presented by Terzi (2014) as a practice of education that allows social justice, fairness and equal participation. If referring to this notion, child workers who had been shown by many studies as being prone to unsuccessful learning (Holgado et al., 2014, Psacharopoulos, 1997; Ray & Lancaster, 2005) might be treated in an inclusive setting. There are at least three reasons why inclusive education can meet the needs of child workers. First, inclusive education promotes the formation of self-conception and social relationship skills (Friend & Bursuck, 2006; Staub & Peck, 1994/1995). Second, inclusive settings enable a differentiated approach to engaging with children who display social-emotional problems, consistent misbehaviour, and poor self-vision (Friend & Bursuck, 2006). Third, inclusive education is a gateway to a democratic education, in which the basic rights of students to receiving education regardless of their competences and disorders is guaranteed (Allen & Cowdery, 2005). ILO (2004) advocates that democratic approaches to learning would help to counter child workers' circumstances. A model of education that encourages child workers to think critically, be innovative, able to solve problem, and interact with other people (Kluttz, 2015) can be found in more inclusive and democratic approaches to education.

The study suggests that the Indonesian government should carefully design a comprehensive plan for school and teacher readiness as part of its agenda to eliminate child labour and return child workers to school. This may also lead to the manifestation of democratic education in Indonesia. Striving for child workers' equal access to quality education is a demonstration of lifting up the basic rights of economically, socially, and culturally marginalized and disenfranchised communities. This study highlights the need for school institutional readiness, including curriculum modification, assessment and evaluation, learning activities, methods, and time allocation for students with special needs, alongside teacher readiness embracing different mindsets, understanding students' special needs and improving pedagogic skills, particularly methods to enhance students social' skills.

Finally, the study leaves a number of issues to be examined in future research. This research focused on the perspectives of teachers whose schools were part of PPA-PKA program. Investigating child workers' voices on the impacts of the government programs would provide further insights to this issue.

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The university as ideological state apparatus: Educating to defend the corporate status quo?

Ken Udas
University of Massachusetts Boston, US *ken.udas@gmail.com*
Adrian Stagg
University of South Queensland, Australia: *Adrian.Stagg@usq.edu.au*

The function of the university in serving the state is the reproduction and legitimization of state functions and behaviours. Theorized in this manner, the university is observed as an internal auxiliary agent of the state that is made subordinate to dominant class interests and not as an independent agent able to critically and selectively respond to state policy and industrial incentives. The paper argues for the application of an instrumental theory of the state to frame the relationships between the contemporary university and the state in corporate liberal and neoliberal democracies. By offering a critical application of state theory, the authors provide a conceptual framework from which to build methodological approaches that explain why universities in advanced, capitalist societies have so thoroughly adopted neoliberal structures and behaviours. While previous research has offered critical approaches that tend to document how phenomena such as managerialism have become commonplace, this paper reviews an instrumental theory based on the power structure in which the university is cast within the state as part of the ideological state apparatus. Current critical research documenting the corporatization of the university is first considered then aligned with a theory of the state that not only accommodates academic capitalism but also points to the reasons for universities' inability to engage in a serious critique of corporate liberal democracy.

Keywords: university; theory of the state; instrumentalism; corporate liberal democracy; advanced capitalism; corporate ideal; common good; private good; academic capitalism; ideological state apparatus; academic freedom; corporatization

INTRODUCTION

It is recognized that contemporary universities in advanced capitalist societies have adopted structural and behavioural qualities typical of neoliberalist organizations. This landscape has been well documented and analysed from a variety of perspectives by critical scholars on higher education (Aronowitz, 2004; Ginsberg, 2013; Giroux, 2014). By revisiting instrumental state theory and the ideological state apparatus (ISA), the authors wish to extend the significant contributions that critical research on higher education has made during the past four decades. The authors contend that revisionist instrumental state theory offered by Clyde Barrow (1990), Louis Althusser (2014), William Domhoff (1979), Ralph Miliband (2009), Jürgen Habermas (1988), and others

provides insights into why universities have changed and continue to do so—to first accommodate corporate liberalism and later neoliberalism.

A coherent body of critical literature has formed around the theory of academic capitalism (Cantwell & Kauppinen, 2014; Slaughter & Leslie, 1997, Slaughter & Rhoades, 2004;). The authors see theory of the state complementing and extending constructs such as academic capitalism, namely "mechanisms that [connect] academics to the market possibilities opening up and focused on organisational processes . . . expanded managerial capacity . . . and resources, rewards, and incentives that moved actors within the university from the public good knowledge/learning regime to the academic capitalist knowledge/learning regime" (Slaughter, 2014, loc. 45). We argue that the theory of the state extends critical analysis beyond the mechanisms that describe how the university has changed to the essential relationships the university shares with the capitalist state that explains why the university corporatized under corporate liberalism and commercialized during neoliberalism. We contend that the university's role as an auxiliary agent of the state restricts the university's ability to engage in critical dialogue about state-sponsored capitalist forms of democracy and the state's role in privatizing the common good.

Much of the critical scholarship cited in this paper addresses how neoliberal values are insinuated into university structure, focusing on university behaviour rather than the broader socio-structural context in which universities serve. This scholarship widely cites policies and incentives that are frequently inconsistent with stated values and essential sources of legitimization on which the university and professional professoriate have relied, such as: academic freedom; intellectual autonomy; and independence from elite as well as populist political, cultural, and social norms (Gerber, 2014). Adopting a critical theory of the state based on the tradition of Marxist power structure scholarship not only provides a broader context for the findings flowing from theories such as academic capitalism but also provides openings for more radical and systemic corrective action that challenges norms that reproduce and legitimize the ideology of corporate liberal and neoliberal democracy.

Failure to adopt a theory that recognizes the relationship of the university to advanced capitalist interests within the state apparatus increases the likelihood that critical scholarship will generate recommendations for solutions that perpetuate, reproduce, and legitimize the values, structures, and behaviours that the scholarship is rightly and thoughtfully criticizing. It is the authors' intent to propose a conceptual approach based on instrumental theories of the state to frame the problem in ways that point to a number of questions meriting additional consideration.

CONTEXTUAL SCOPE

The bounded scope within which these theories operate (and are applied) merits explicit attention to ensure clarity of language, shared understanding of purpose (without which the application of instrumental theories becomes both unfocused and uncritical in the geographical scope), and conceptual rigour. Therefore, articulation of the rationale for selecting the lenses of Australia and the US, and precision of language for neoliberalism, in particular, are required to demonstrate a purposeful approach and ideological consistency.

While recognizing the important contributions that the English university tradition has made to both Australian and US higher education, the authors have decided to follow the foundational research by Slaughter and Leslie (1997) that resulted in the theory of academic capitalism and relied heavily on data collected at universities in US and Australia. In addition, although England left its fingerprints on the two nations' histories of higher education, both Australia and the US were influenced by other national legacies. While Australian university life was influenced by Scottish intellectual and organizational tradition, the German research university influenced the development of US higher learning (Davis, 2017; Hofstadter & Metzger, 1955; Storr, 1969). Using Australia and the US as subject nations provides a comparison of like nations as siblings, rather than turning to the parent nations of England, Scotland, or Germany. In effect, Australian and US higher education share a common legacy of British and Continental rule, making them first-generation 'new world' universities, separated from their colonial progenitors by geography, need, and cultural attenuation from Europe. Although there may well be benefit to including Canadian, New Zealand, and universities from other outposts of the former British Empire, the purpose of this paper is not principally comparative. We do recognize the substantive differences and similarities between Australian and US higher education and believe that an in-depth comparative essay of the role of universities as ISAs in Australia and the US could be a valuable contribution to higher education literature and a natural extension of this essay.

Contemporary media and academic critique often places a negative value association to the term neoliberalism; a trend that has made the term increasingly difficult (and thus increasingly important) to contextually define with precision, resulting in Peck's (2013) observation that it "has always been an unloved, rascal concept, mainly deployed with pejorative intent, yet at the same time apparently promiscuous in application" (p. 133). Often misconstrued as arising from a single-cause influence, neoliberalism arises from a melting pot of nuanced reactions and evolutionary processes, each with a distinct ideological stance. This paper draws on the work of the second Chicago School (most influenced by Milton Friedman), and the Virginia School (shaped in part by the work of Gordon Tullock). It has been asserted (Birch, 2017, p. 30) that these schools are the ones usually inferred by modern writers when referencing neoliberal thought; however, exacting attribution rarely arises from such inferences. Broadly, both schools favour a pro-corporate, 'anti-state' approach that positions the free market as a natural organizing mechanism for society (Birch, 2017).

The deliberate selection of these schools to inform the neoliberal aspects of instrumentalism leading to the corporatization of the university (and by extension knowledge commercialization) arises from their international policy and political influences that converged from the 1980's onward to shape societal views of education. Neoliberal politicians were ascendant during this decade (Thatcher, Reagan, and Hawke in the UK, US, and Australia respectively), all of whom favoured deregulation, efficiency metrics, and managerialism—all of which have continued impact on higher education in those countries. Furthermore, this decade reflected policy change in international organizations (such as the World Bank and International Monetary Fund) to favour privatization, marketization of public services, and market deregulation (Birch, 2017). For Australia, it also ushered in a fundamental change to educational funding, shifting the onus of financial burden from the state to the student (with the implementation of state-administered student loans known as HECS) that effectively yet subtly repositioned education from a public good to a private one.

The temporal convergence of neoliberal ideological ascendancy within the same decade across both the nation of colonial rule (the UK), and the 'sibling states' (Australia and the US) sympathetically resonates across political leadership, and educational policy—thus creating a case for the type of comparison and alignment within instrumentalist theory that forms the basis of this paper.

POWER STRUCTURES AND THE STATE

The purpose of this article is not to review theories of state but, instead. to analyse the university's relationship with the state. We contend that in mature capitalist democracies (including Australia and US) the state functions principally to mediate capitalist interests within the context of neoliberal and corporate liberal democratic forms and that universities function as part of the state apparatus. We limit our thinking to universities in mature capitalist states and adopt an analytical theory of the state that posits:

- The state serves as an instrument of the dominant class, which, for the purposes of this paper, is assumed to be the capitalist class.
- The state functions through a state apparatus composed of numerous institutions that coalesce into groups identified as the governmental, administrative, coercive, and ideological (ISA).
- State power is separate from the state apparatus through which the state elite channel power.
- Within this context universities serve as part of the ISA.
- The stability of the state depends on its ability to serve the interests of capital accumulation and on its ability to maintain the popular perception that its values, as articulated through policies and activities, are indicative of a popular democracy.

These five salient qualities of the state are principally instrumentalist in nature and have roots in the major movements of revisionist socialism reaching back to Eduard Bernstein's (1967) argument for evolutionary socialism in the late 19th Century. The benefits of instrumentalist state theory for our purposes is that it provides an important role for understanding the university in the state apparatus as institutions that reproduce the values of the dominant class, conceptual structures that promote corporatization, generalizable methods for assessing the influence of the dominant class, and the possibility for recommendations leading to change. Furthermore, these five qualities represent 'lenses' through which each aspect of the university, as part of the state apparatus, can be critically examined in terms of a discrete phenomena and as part of an interlocking, sequential explanation of causation.

The commonly held assumption that the US and Australia are currently functioning as advanced capitalist societies is almost beyond dispute. The combined features of an economy characterized by advanced industrialization and a concentration of private ownership and control over economic activity among an identifiable class provides the texture of mature capitalist societies (Miliband 2009). Furthermore, as Louis Althusser (2014) asserts, capitalism's principal characteristic is the exploitation of labour by the dominant capitalist class—the class of individuals with whom private ownership and control has accrued. It was through processes of colonization and industrialization that the US and Australia transitioned—post-conquest of indigenous peoples under the logic of manifest destiny or *terra nullius*—from traditional agrarian and mercantile societies to

industrial and now finance capitalist regimes. These regimes are characterized by monopoly capital, globalization, aggressive use of legal instruments to assert private ownership of intellectual and cultural assets as intellectual property, and use of the same legal instruments to protect and commercialize these assets. It is in these advanced capitalist societies that the doctrines of capitalism have not only become unquestioned but also gained the status of being fundamentally unquestionable. The doctrines of advanced capitalism are simply assumed in public debate, policy development, and legislation with active support of the state (Habermas 1988; Miliband 2009).

The doctrine of capitalism—especially during the Industrial Revolution—grew from the subversion of the English courts to condone a system of enclosure wherein public land––a common wealth—was appropriated by the few who sought to leverage maximum private economic yield masked by false economies of returning this yield to citizens through taxation and contractual regimes. The use of public land for private good through government contracts has been well documented (Bollier, 2002), yet the privatization and commercialization of intellectual property within universities continues unabated and is actively encouraged by governments of advanced capitalist societies. The private ownership of tax-payer-funded research becomes a conceptual enclosure that has been normalized by researchers at the expense of societal benefit. This represents another milestone in the formation of the modern capitalist state.

In the US, it was during the decades spanning the turn of the 20th Century that the modern capitalist state took shape in the form of corporate liberal democracy. Furthermore, according to James Weinstein (1968), the rise of corporate liberalism introduced ambiguity into the meaning of liberalism as the "nature of liberalism [changed] from the individualism of laissez-faire in the nineteenth century to the social control of corporate liberalism in the twentieth" (p. xi). It was during this conceptual shift in the meaning of liberalism that the corporate liberal democracies became characterized by capitalist states that operate through a state apparatus organized in patterns through which the dominant capitalist class exercises power, authority, and influence. Although the state apparatus is the organizational channel through which the dominant class exercises control, it is not by necessity capitalist in nature (Barrow, 1993; Miliband, 2009). Examples of other classes that could potentially assume a dominant position in the state apparatus include labour, intellectual, hereditary aristocratic, and populist classes.

From a topological perspective, Althusser (2014) points to Marx's interpretation of state structure, noting that the state apparatus in mature capitalist societies has an infrastructure referred to as the economic base and a superstructure that includes legal-political apparatuses and ISA. The economic base maintains a capitalist mode of production grounded on exploitation of labour and the accumulation and concentration of wealth. It is exploitation of labour that results in surplus value (profit) that is the defining principle of capitalist production; and it is the economic base that provides the necessary capacity to support capitalist modes of production through legal and political processes and infrastructure, such as capital markets, banking systems, and regulatory agencies organized within a legal regime. Coercion through the police, military, and court systems serves the economic base by ensuring that there are consequences associated with illegally undermining the conditions that support the economic base. Furthermore, Althusser (2014) reminds us that the legal system in liberal corporate democracies is the law of the dominant class of capitalists who design, develop, and interpret law in ways that primarily benefit the dominant class.

While the economic base of the state apparatus directly supports capitalist modes of production, the principal purpose of the ISA is to ensure that the conditions of production under the rule of the dominant classes are maintained. The ISA ensures that the system normally operates without repressive intervention of coercive apparatus. The objective of the ISA is simply and seamlessly to 'make things go' naturally, by simultaneously making capitalism appear to be the only reasonable way of organizing society and creating the perception that state behaviour is legitimate (Althusser, 2014). The prevailing and unquestioned adherence to perpetuating the illusion of capitalist ideology as a natural and harmonious organizing force for human society becomes entrenched by rewarding—with resources, status, and prestige—those apparatus that align with, and legitimize dominant capitalist narratives, activities, and behaviours (Barrow, 1990).

Before moving onto a discussion about the university as an ISA, we want to briefly reiterate that we subscribe to a theory of state that is based on the belief that monopoly capitalists form a dominant class, exercise class-consciousness and act through the state apparatus in ways that not only benefit capitalists but also reproduce the conditions of production. We recognize that there are alternative schools of thought that challenge this position and that our treatment of the state does not give proper attention to the role of civil society or the public and private spheres; however, the purpose of this paper is not to describe and analyse competing theories of state.

UNIVERSITIES AS IDEOLOGICAL STATE APPARATUS

Universities function as part of the scholastic or educational ISA. As such, the university serves the state apparatus and the dominant capitalist class by reproducing the conditions of production. The university performs the reproduction function by providing capacity to support the economic base. For example, the university provides professional training to supply industry with labour, replenishes the intellectual class, reinforces the elite capitalist class that serves as the industrial and state elite, and provides research to support economic development and national defence (Barrow, 1990).

The university also performs the reproduction function of legitimizing the corporate liberal state by creating the perception that the state is functioning as a democratic organ for the common good. The corporate liberal state requires popular legitimacy and it must balance its service to the dominant class of capitalists while also maintaining its perceived legitimacy as an agent for the common good (Domhoff, 1978); that is, the economic base of the state apparatus functions to serve the interests of capitalist accumulation and concentration of wealth directly while the ISA does so indirectly. Therefore, the state is meant to serve the private interests of the dominant class while the university, as an ISA, must reproduce conditions in which the population is willing to acquiesce to the capitalist class interests and accept exploitation (Althusser, 2014). These objectives tend to be accepted but not without ongoing resistance and the potential for radical defiance and conflict. The various ISAs (including the university) are most successful in this regard when they are able to increase the scope of indifference the population has towards state and industry sponsored exploitation and coercion, creating conditions of passive acceptance with the perception of individual choice and meaningful public debate. In this way, state and industry sponsored exploitation and coercion are viewed as legitimate. This logic is the functional correlate of Habermas' (1988) treatment of legitimation and motivation crises that are endemic to advanced capitalist systems. Habermas argues that

it is through the legitimization provided by ISAs that crises and disruption of the advanced capitalist system are mitigated or avoided and do not result in active class conflict.

The extent to which the ISA can influence the legitimacy of state action dictates the extent to which the common good may be exploited for private wealth accumulation without unacceptable disruption to the system as judged by the dominant class. Therefore, we can study the legitimation function of the university by assessing the amount of authentic dialogue and behaviour that is exercised through the university research agenda, curriculum, and service commitments that directly support the common good when it is in conflict with university behaviours that serve to concentrate wealth in the dominant capitalist class. The relative commitment to the common good vis-a-vis the private good is a measure of a university's resistance to its role as an ISA charged with building an impression of legitimacy and supporting the values of advanced capitalism. Determining the university's commitment to the common good is, of course, easier said than done because, frequently, different actors see the same behaviour differently.

Although there is some critique of exploitation of the common good for private gain, we might expect a more fundamental critique of the university's role in supporting doctrines that dominate advanced capitalism; however, there is little evidence of mounting critique that seriously challenges corporate liberal democracy or the roles that universities take in reproducing the conditions necessary for production in advanced capitalist societies. It was Miliband (2009) who not only identified the general lack of critique among intellectuals and universities but also pointed to the factors that make universities conservative institutions. Miliband points to the conservative influence of the state and business, the financial dependence of universities on wealthy individuals and businesses, how conservative boards of trustees often dominated by business people dictate university governance, and the growth of corporate enterprise and its ability to influence the purpose of the university as reasons why universities tend to protect and extend the capitalist status quo and ensure that democracy is discussed in rather narrow terms. Furthermore, Miliband (2009) correctly asserts that the study of business, the field of university study often with greatest enrolments, not only provides technical training but also ideologically reinforces advanced capitalism and the values of corporate liberal democracy. Although there may be more dialogue within the university than other parts of the state apparatus, of the more than 5,000 colleges and universities in the US and 40 Australian universities, to the knowledge of the authors, not one openly advocates in its mission or strategy, economic and social relationships that are not fundamentally capitalist in nature or academic programming through their professional schools based on collectivist social, political, and economic principles. The university's role within the ISA militates against behaviour potentially disruptive to the capitalist order.

The argument follows that as an ISA, the university serves as a critical auxiliary agent to the capitalist class. Its self-imposed limitations and accepted sources of prestige have encroached on what we think of as the traditional values of the university and those of the professional scholar as an autonomous and self-determinate intellectual (Barrow 1990). The auxiliary agency role of universities seems like outsourcing but it is actually a form of in-sourcing because the ISA is part of the state apparatus. This form of in-sourcing is couched in terms of contract research and other forms of competitive funding, creating a loosely coupled and contested space between the university, individual academics, the state, industry, and foundations. Nevertheless, the appearance of separation of the university from direct intellectual control of the state and its ability to

support safe criticism of advanced capitalism and the state is essential to the role that universities must play in legitimization. It is this tension, which is the source of conflict between the capitalist class and the intellectual class, that plays out as members of the academic intellectual class try to retain some authority within the university and perhaps even society more generally (Barrow, 1990).

By way of example, the Australian university is the object of operational targets set by federal governments that reinforce capitalist agendas and intertwine capitalist rhetoric within educational policy that throw capitalist and academic ideals into conflict. Through the capitalist lens, federal initiatives to increase student numbers in discrete demographic strata, such as rural and remote students, students of lower socio-economic status background, Indigenous students, and students from non-English speaking backgrounds, are mechanisms designed in response to a perceived non-participation (or marginal participation) with the dominant economic model (Hyden, 1980). Under the aegis of 'widening participation,' specific cohorts are the targets of incentivized assimilation (Bradley, Noonan, Nugent, & Scales, 2008). By 'capturing' targeted social strata within the university system, it could be argued that the promised social mobility manifests as direct opportunities for individual wealth generation that in turn perpetuates the capitalist state. Likewise, student loans shift the responsibility for education away from the state, instead becoming an individual 'investment' that normalizes debt as a necessary pre-existing condition for financial success in this environment. For their role in this process, universities are awarded a share of federal funding, without which most Australian universities would cease to exist. The implication, therefore, is that the university as ISA legitimizes the status quo by inducting and acculturating students into capitalist norms that reinforce rather than directly critique dominant ideologies. Manifesting in this manner, it does so at the behest of a compromised government that normalizes commercialization of publicly-funded research outputs, largely funds higher education for meeting targets that promote engagement with the capitalist class, and describes higher education in rhetoric that positions education within an internationally competitive marketplace.

Why is it that the tensions that result from discontinuity between traditional academic values and those embraced as part of the corporate ideal, while recognized, go largely unaddressed? The authors believe that a potential answer may be found by considering the university's role as an auxiliary agent of the state apparatus.

Corporatization is easily observed in the university when it takes the form of managerialism and archetypical capitalist behaviours. However, concentrating exclusively on corporatization phenomena may obscure the fundamental relationship between the university and the state and, through the state, its relationship with the dominant capitalist class, frequently taking the form of industrialists, monopoly, and finance capitalists, and the bureaucrats that develop state policy.

MANAGERIALISM AND THE CORPORATE IDEAL

The managerialism affiliated with corporatization of the contemporary university is tied closely to the changing roles of universities and the introduction of the 'corporate ideal' dating more than a century ago when we see the parallel transition of the US from a modern and mature liberal industrial state to an advanced capitalist state, and the concurrent formation of the modern research university and its new role as ISA. It is the

introduction of the corporate ideal as a dominant organizing principle that fundamentally creates different roles for university trustees and executive managers who represent the proprietary interests of the university from the university faculty who serve as intellectual labour (Cattell, 1913; Veblen, 2015). Although it is acceptable within bounds for university academics to, for example, criticize the commercialization of educational offerings and the privatization of knowledge, resist incentives to conform to externally imposed publication standards limited to Q1 journals, or question the cost of and authority vested in non-academic managerial staff, it is not acceptable for the university to function as an enterprise in ways that fundamentally challenge the state, its class interests, and its efforts to corporatize the university. To do so would be to repudiate the university's role as ISA and the benefits accrued through functioning as an auxiliary agent of the state.

Clyde Barrow (1990) develops a convincing account of the transformation of the US college into the research university serving within the state apparatus as part of the scholastic ISA. In his essay, Barrow studies the changing composition of university governing boards and their growing relationships with industrial and financial capital through interlocking directorships. It was during the first quarter of the 20th Century that boards of trustees established and asserted their proprietary rights and responsibilities to govern the means of intellectual production at the US university. It was during this same period that the official representative of the professional professorship, the American Association of University professors (AAUP), conceded faculty rights to governance and management in exchange for job security and procedural transparency (Barrow, 1990; Schrecker, 1986). The compromize represents a shift for the AAUP away from the academic ideal to the corporate ideal proffered by trustees and incentivized by a number of corporate sponsored foundations (Tiede, 2015).

During the first quarter of the 20th Century, 'the businessman' was established as the expert type most qualified to address the problems of higher education (Veysey, 1970). This position was entirely consistent with trustees who frequently had industrial and finance backgrounds (Thelin, 2011). With the rise of the professional school, the university degree became part of the calculus for material improvement of both the individual and society more generally (Geiger, 2015). In the spirit of social efficiency, the Carnegie Foundation for the Advancement of Teaching (CFAT) was interested in making US higher education more efficient in order to better accommodate the financial pressures associated with increasing demand for educational services. The demand was generated through the needs of industry, which did not really want to pay for training and scientific advancements; and the democratic motivation to create access for social mobility, which many in the aspiring class could not afford. CFAT used its funding and promise of a pension fund for faculty to influence university boards, administrators, and professionals to adopt the corporate ideal of industrial efficiency and apply it to intellectual labour in universities functioning as knowledge factories. These socially desirable ideals would be operationalized through the principles of scientific management, including specialization, division of labour, standardization, and other methods leading to efficient operations that had to be measurable to support management decision-making and improvement. CFAT managed to provide a tool to quantify educational efficiency through the introduction of the Carnegie Unit, which was assigned a standard unit of annual teaching contact hours that could be translated into teaching load and average cost per student per course. The standard allowed efficiency comparisons across institutions, state systems, disciplines, and individual instructors. (Silva, White, & Toch, 2015)

The CFAT was able to align social need for efficient and useful education with the interests of industry, represented on university boards of trustees, and the desires of academic administrators and the developing professional schools. The foundations then catalyzed reform by selectively providing financial resources to compliant universities. Working with the US Bureau of Education (USBE), CFAT, along with its network was able to outline general principles that appealed to the popular notion of social efficiency as advancement, and then offered methods of scientific management to operationalize those values. Those universities that met the standards valued by CFAT, Rockefeller's General Education Board (GEB), and other foundations, were rewarded through financial support and access to the Carnegie Teachers Pension Fund, presidents were rewarded with access to industrial resources and appointments on boards, while high producing scholars were rewarded with grants, lectureships, and consultations. It was through building an archetype of prestige and status that elite universities were formed, and it was through rewarding that archetype that the model of a prestigious university was reproduced. Elite universities were rewarded by the foundations for adopting the corporate ideal, which was a necessary step to effectively serve as part of the ISA in the corporate liberal state. The financial involvement of the foundations and their support of the USBE was essential to creating a de-facto standard of excellence among universities aligned with the corporate ideal because the federal government in the US has no policy or funding control over higher education. (Axtell, 2016; Barrow, 1990)

The CFAT, GEB, and USBE worked alongside scientific management scholars such as Frederick Taylor's prodigy, Morris Cooke (1910), to not only conduct research on university efficiency and administer measurement surveys for benchmarking but to also provide training and consulting services from efficiency experts to university administrators. So, it was during the first quarter of the 20th Century that the major foundations along with the USBE created a method to standardize university management, acculturate administrators in the principles of efficiency, and reproduce the idea and methods for achieving status and prestige (Barrow, 1990).

The methods of scientific management are predicated on control in order to reinforce predictability, certainty, and repeatability (Boyd, 1978). Originally applied to measure university efficiency along the lines of industrial organisations, these methods have impacted the core activities of curriculum design, course development, teaching practice, and research. "As such, any educational system under this technical rationality credo asks only how the facts can be maintained; rather than any investigation of the rationale for these facts" (Boyd, 1978, p. 176). The focus of performative measures in the educational institution, therefore, have little concern for social change and civic engagement but, instead, privilege predictability and repeatability while normalizing "league table" approaches that encourage compliance and conformity rather than critical thought. Within this system, students are positioned as "passive consumers" (p. 179) who are expected to support and maintain the dominant problematic. This aligns with Marcuse's (1969) argument concerning "if education is to be more than simply training for the status quo, it means not only enabling [citizens] to know and understand the facts which make up reality, but also to know and understand the factors that establish the facts so that [they] can change their inhuman reality" (p. 82).

Technical rationality, furthermore, divorces decision-making in education from values; instead of requiring of students that they "learn how values are embedded in the very texture of human life, how they are transmitted, and what interests they support regarding

the quality of human existence" (Giroux, 1983, p. 204). However, in considering the relationship between universities and ISA, universities have accepted—for the most part––government-enforced targets of retention, progression, attrition, inclusion, and graduate employability as the proxies of educational quality; while success is determined by industry partnerships, commercialization of research, and the acquisition of external funders for research. The dominant problematic caused by over-subscription to these 'measures of success' is a dilution of the educational role for democratic engagement, which diminishes the broader societal agency of students and faculty.

CONCLUSION

The instrumentalist theory of the state that we have adopted in this paper relies on power structure methodologies. We accept, based on the research of class dominance referenced throughout this essay, that a state compromized by capitalist elites serving the interests of advanced capitalism through the state apparatus. We posit that the state is structured in such a manner that universities, along with other cultural organizations, serve as part of the ISA in which the university's principal functions are to reproduce the conditions of production and to legitimize the state and those who control it. That is, the university becomes an auxiliary agent that serves the state from within the state apparatus. In this way, we assert that, although it may be that the corporatization of the university or the university's engagement in capitalist-like behaviour is how the critical role of the university within democratic society has been diminished, these are not the reasons why the university is non-critical. We assert that it is because of its ideological role within the state apparatus that it is only able to seriously promote the reproduction and legitimization of advanced capitalist needs within corporate liberal democracy. It is only able to offer alternatives to the status quo within a rather narrow spectrum of political, social, and economic alternatives that fall well within the orbit of free market enterprise and private ownership. In effect, the university is bound by the role that it serves to legitimize the privatization of the common good through its curriculum, research, service, and outreach.

It is our argument that developing and adopting methodologies based on power structure analysis within the theoretical construct of instrumentalist state theory will provide opportunities for researchers to rethink the development of the university alongside the periodization of capitalism and the advancement of the liberal state, offer the potential for predictive models of the university under different circumstances, and point to the constraints and opportunities for influence that the university could exercize within its role as an ISA. Although conceptual frameworks and theories such as academic capitalism are powerful intellectual tools that have been used to describe and analyse how the university has changed with impressive thoroughness, they have principally constructed the university as an independent actor with ties to the state. The state itself, having been largely limited to the government, places the university outside of the state while simultaneously neglecting the legitimization role the university has with the state. This has itself resulted in creative and insightful critical analysis of the condition of the university in societies dominated by neoliberal values and the direct causes for change and implications of change which should not be undervalued; but is has also resulted in solutions and recommendations for change that seem captured by current dominant values.

To illustrate this point, we refer to a recent essay by Gary Rhoades in *Academic Capitalism in the Age of Globalization* (2014) in which he provides four examples for

potential university reform through organization and negotiation. Although each of the examples are clearly valuable and will perhaps improve academic life, they do not fundamentally challenge the context in which the university serves. None of the examples address the fundamental issue of who the university serves, how the university serves it, and in what context. More importantly, none of the examples offered challenge capitalist assumptions and, therefore, reinforce the values of the advanced capitalist state, in effect fulfilling the university role as an ISA that legitimizes the capitalist state through 'safe critique' providing the perception that the state is allowing democratic action as a legitimate organ of democracy. Although addressing immediate concerns, the examples offered by Rhoades essentially serve to refine, entrench, legitimize, and reproduce the most fundamental assumptions of capitalism. If our objective is to broaden the possibilities for discussion about democracy, the real question here must not be how to improve the conditions of academic life under assumptions of academic capitalism but, instead, how to provide room to fundamentally challenge advanced capitalism—and, for this, we need to adopt and develop theory that accurately places the university in its service to capitalism. We can then start asking serious questions about how a university would behave as an ISA in collectivist or social democratic societies rather than within the context of corporate liberal democracy.

If we accept the examples as positive incrementalist approaches to change, they still place us primarily in the realm of economism, which many left-social democrats see as a safe form of revisionism that will not disrupt the capitalist order because it is based on the principles of more equitable wealth distribution, while not necessarily questioning the overall arrangements of exploitation. Returning to the core principles of social democracy allows us to question the fundamental relationships between the common good and the private good within liberal corporate democracies, the state, and the role of the university. Looking at what resides underneath the undeniable corporatization of the university provides opportunities to critically assess strategies for change. The fundamental questions that we currently face parallel those debated historically by revolutionaries and evolutionists. Can the university form its own agenda in support of authentic democracy and, if so, how will that agenda be nurtured and implemented and, even if it can, will it be able to influence broader society? Regardless, without the ability to engage in authentic democratic processes, it seems unlikely that the university will do much other than serve the capitalist state. Without a guiding theory of the state that frames the problem as one of capitalist rule, the dialogue stays very narrow and safe—just as power structure analysis suggests it is supposed to be.

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Negotiating imagined community in national curriculum: The Taiwanese case

Yu-Chih Li
University of Queensland, Australia: *yuchihemilytw@gmail.com*

Due to its historical and geopolitical contestations, Taiwan is a country whose people possess divergent imaginations of the national community. Such a condition has been described as institutional liminality, which captures Taiwan's status as not a complete nation state nor a non-nation state; not China nor non-China. Under such a condition, people recognize themselves either as Taiwanese, Chinese, or both. Through utilizing the concept of imagination, especially Anderson's notion of "imagined communities" and Harvey's interpretation of "geographical imagination," this paper investigates the representation of imagined communities embedded in various revisions and makings of the national curriculum in Taiwan. A specific focus is put onto the revision of the national historical curriculum at the senior high school level and the resistance to it during 2014–2016. It is argued that through organizing protests and boycotts against the revision, students are no longer simply pure receivers of official knowledge, they actively express their imagination of the national community and participate in the negotiation of official knowledge, which gives the national curriculum a more democratic base.

Keywords: national curriculum; democracy; imagined community

INTRODUCTION

Throughout its history, Taiwan had been colonized by different empires/countries, such as the Netherlands, Spain, Ming Empire, Qing Empire, and Japan. After World War II, Taiwan was taken over by the Chinese Nationalist Party (Kuomintang, henceforth KMT) government from the Japanese regime. Along with the democratization of its political realm since the 1980s, Taiwan has undergone a reconstruction of its national identity.

In the process, there have been correspondent curricular reforms and accompanying revisions of the national curriculum. In a reification of official knowledge (Apple, 2014), revisions of the content of the national curriculum reflect the ideology and interest of the political parties in power and represent voices of the dominant group in the society. In addition, the modification of the national curriculum casts significant impact on the reconstruction of the national identity from the former colonial conditions in Taiwan. Anderson (1983/2006) considers the formation of nation states as imagined communities. He argues that print capitalism and, subsequently, mass schooling that ensured general literacy of the common were together central to the creation of the "imagined community" of the nation. Harvey (2006) identifies the geographical imagination of nation states; that is, national identity needs a territorial base to build upon. For the reason of solidarity, it is desirable and a must for nation states to create and to equip their citizens with geographical, historical, and cultural knowledge of the states. Because of its colonial

history and geopolitics, the imagination of the Taiwanese national community is at the centre of revisions time after time.

The focus of this paper is on the discourse surrounding the revisions of the national curriculum and the resistance against a restructuring of official knowledge as represented by the national curriculum. The study argues for the significance of participation and contribution made by the students, at the levels of both secondary and higher education. Through actively participating in the making of official knowledge, the student should no longer be seen as a mere passive receiver in the process of socialization but as actively contributing to the negotiation/shaping of the communal imagination of nation.

The paper begins with an analysis of the coerciveness of the national curriculum, which functions in relationships with the credential systems as well as the publishing industry. In the following section, the dominance and hegemony of the national curriculum from the perspectives of culture, society, and economy are discussed against the conceptual tools developed by Anderson (1983/2006), Harvey (2006), and Apple (2014). Then the dividing imaginations of national community embedded in the various curriculum revisions throughout the history of education in Taiwan are analysed. Based on the analysis, the paper goes on to discuss students' role in the protest and their representation in the new curriculum review committee as of importance in the negotiation of official knowledge. The paper concludes by discussing the imagination of the national community and how it is linked to democracy in Taiwan.

This Taiwanese case is analysed in light of considering education from the perspective of democracy: whose imaginations of national community are legitimized or marginalized in the construction of official knowledge, the (non)functioning of democratic mechanism in education, and students' role in constructing the national curriculum.

THE COERCIVE MECHANISM OF THE NATIONAL CURRICULUM

In Taiwan, the power and the function of political socialization in relation to the national curriculum operates in three ways. First, the Ministry of Education (MoE) legally recognizes schools that run according to the national curriculum. Only such schools are able to offer officially recognized credentials to their students. In other words, the national curriculum in Taiwan represents not only a random version of curriculum but also the only official and legally operating curriculum. Very few international/private schools (26 in the total number of 3,871) are allowed to adopt different curriculum systems in Taiwan. Usually, student recruitment to these international/private schools is limited to those who hold a nationality/passport other than Taiwanese. This reflects the normative characteristic of the national curriculum.

Second, there is a strong link between the publication of textbooks and the textual representation of the curriculum, namely, the *Curriculum* Standards (MoE, 1971, 1983, 1994) and successive curriculum guidelines (MoE, 1998, 2005, 2010). Before 2000, textbooks used in schools were restricted to those composed and published by the National Translation and Compilation Centre, an institute established as the sole supplier of textbooks under the MoE. As a result of societal demands more educational liberalization in the 1990s, curriculum guidelines were introduced that were less directive and domineering than previous ones. At the same time, the compilation of textbooks ceased to be exclusive to the National Translation and Compilation Centre. Private publishers

were allowed to publish their own textbooks and put them into the market for use in elementary and secondary schools as long as they followed the curriculum guidelines and passed the textbook review stage organized by the National Academy for Educational Research. Although the private sector was given permission to publish, it should be noted that there is little variations in the compilations of different publications.

Third, the common external entrance examinations taken by students in year 9 and year 12 is designed according to the curriculum guidelines. Textbook editors and publishers are required to provide readers with the information needed to pass the exam. In other words, the national curriculum secures its representation in textbooks and its impact on the publishing industry through both the review processes and the entrance examinations.

THE REPRESENTATION OF OFFICIAL KNOWLEDGE

The national curriculum has served the function of social integration and the formation of community in Taiwan throughout the country's history. In the period of Japanese colonization, the Kominka movement was an assimilation policy aimed at making Taiwanese people imperial citizens and loyal to Japanese Emperor (Peng & Chu, 2017). Through public education, it was intended that Taiwanese people, as the colonized, would one day be integrated into imperial Japan and would share a similar national identity to Japanese citizens. In the Chiang Kai-shek and Chiang Ching-kuo's presidency, the national curriculum was designed to make the Taiwanese people genuine 'Chinese' who supported the KMT government and its bid to retake Mainland China (Lin, 2003).

Taiwan is not the only nation that uses its national curriculum and mass education to craft a particular identity or sense of community. For instance, Anderson (1983/2006) examines the making of 'Indonesian-ness' and the function of the education system that develops and helps such a creation. In the period of Dutch colonization, some Indonesian were educated as bilingual elites who spoke both the language of the colonizer and of the colony for the purpose of regime and serves to develop a revised imagination of a national community.

In Anderson's analysis (1983/2006), the education system works in a few ways and contributes to the making of a new imagined community. First, bilingual abilities enable local elites to engage with modern Western thoughts, including the models of nationalism and growing national-states elsewhere. Second, there were education ladders made for colonial elites which corresponded to the colonial territories. In undertaking colonial education, local elites were made to travel from the colonial locales and regions to metropolitan centres. Such education ladders provided the territorial base for the imaginary of the colony as well as the new national community. People lived in those territories and thus can be identified as the 'nationals' of the new nation. Third, the expansion of the education system produces a growing group of subordinate cadres and corporate bureaucrats, such as engineers, administrators, schoolteachers, and police, for the state. Fourth, the dissemination of education increases the literate mass and leads to the development of the community imagination. Print-literacy, Anderson (1983/2006) argues, makes it possible to imagine a community with homogenous temporality. He points to the standardized organization of mass education, including standard textbooks and materials, credentials, teacher training, and class divisions which all benefit the solidarity of the new imagined national community.

Harvey (2005) employs the concept of geographical and sociological imagination to depict the relationships between the political communities, that is, the nation states and geographical knowledge. In shaping the imagined community, not only do the territorial bases become potential geographical imaginations of nation states they also impact the formation of nation states. In other words, the establishment of nation states relies on creating particular geographical understandings upon which the national identity can be built. In Anderson's (1983/2006) notion of imagined community, the print-literacy of the mass, which is produced by the education system, creates certain homogeneous temporality. In other words, it is the mobilization of a coherent geographical imaginary that demarcates the boundaries of nation states.

The development of school systems and the compilation of curricular content becomes the means that ruling classes or dominant groups use for shaping a certain 'imagination' of the national community. For example, during the presidency of the former South Korean president, Park Geun-hye, her government introduced the policy that all private published history textbooks used for teaching history in middle and high schools were to be substituted by state-issued ones. The rationalization was the need to instil in students a sense of patriotism. The controversial policy was accused of putting history textbooks into the battlefield of political ideologies, that is, the pro- and anti-North ideologies (Kim, 2018).

A similar move was made in Hong Kong, after its return to China, when the government implemented the "Moral and National Education" (The Curriculum Development Council, 2011, 2012) project, provoking a debate over the boundary of nationalistic and patriotic education. When the authority proclaimed that national education is for making Hong Kong children Chinese citizens, it was criticized as a program of political indoctrination. The introduction and the boycott of the policy reveals the contesting dual identity of Hong Kong, the ethno-cultural 'Chinese-ness' and the civil 'Hongkong-ness' (Morris & Vickers, 2015).

These Asian cases indicate how government and the dominant groups project their imagination of national community onto the curriculum. Through producing the official knowledge (Apple, 1993, 2014), particular ideologies, as part of the selected tradition, are made legitimate and passed down to the people. While some knowledge is marked as important, others are marginalized. Not only those included into the curriculum but also those that are not included. The way knowledge is organized tells us who has power in the society. The national curriculum and its making should be understood in the larger social context so that the hegemonic structures are revealed (Apple, 2009).

The language planning policy and its impact on education in Taiwan during 1946–1987 is an example. The KMT government enforced a strict official language policy in schools. Mandarin, the official language of Mainland China, was promoted as the only language allowed for communication in Taiwanese schools. Other languages, such as Southern Min, Hakka, and Austronesian languages, were marginalized. The policy not only mandated Mandarin as the only teaching language in schools, it also required that pupils who used their mother tongues, that is, local languages such as Southern Min, Hakka, and Austronesian languages, be punished for not speaking the official language in schools (Huang, 2000). In other words, native speakers of non-official languages became the linguistically disadvantaged groups in the society. The Mandarin-only National Language Policy, along with the Mainland Chinese-orientation, created extra difficulties for students whose mother tongues were not Mandarin, as well as increased the obstacles for building

linguistic and cultural identities. As a result, the languages of the subordinate status were neglected and became less relevant, while Mandarin obtained the prestigious status in the school system and in most public domains (Chen, 2006).

In Apple's analysis, the national curriculum of the US designates the convergence of neo-conservatism and neo-liberalism. However, what we see in the cases of South Korea and Hong Kong is that, in the name of creating a 'common culture' or the 'solidarity of society,' certain ideologies are neutralized and disguised as the consensus of the society and legitimized as official knowledge. In the Taiwanese example, the implementation of the Mandarin-only National Language Policy causes the dying out of other local languages. And under the policy of official (linguistic) knowledge, those whose mother tongues are categorized as subordinate languages become disadvantaged in the society. Apart from language planning policies, the representation of official knowledge in the Taiwanese national curriculum has been employed as a means of manipulating the common imaginary of the national community of the next generation.

DIVIDING IMAGINATIONS OF THE NATIONAL COMMUNITY

As a postcolonial society, Taiwan has been continuously undergoing a process of decolonization and citizenship reconstruction. In some nation states, there is a consensus among the ethnic, cultural, and institutional elements of national identity. This is not the case in Taiwan; the geopolitics and historical development of the nation has resulted in its complicated relationship with China, and the complications lead to a division in the imaginations of the national community. Doong (2008) identified four different accounts of national identity tracking through the citizenship education content of Taiwan: pan-China identity, cultural China identity, Taiwan identity, and contradictory/vague identity.

It is critical to note here that Chinese is not the only colonial influence causing the divisions in the Taiwanese national imaginations. However, the intertwined histories and complex geopolitics results in the Taiwanese liminality. The status of being Chinese and non-Chinese at the same time leads to the fact that the presence of China/Chinese-ness has to be a focus when discussing Taiwanese national imaginations. As Peng (2004) puts it, the disagreement in the historical narrative of Taiwan is located in the central political differentiation between pro-unification and pro-independence. The former stance places Taiwanese history as one of local histories under the grand Chinese historical narrative, while the latter stance tends to take Taiwanese history as a national history and sees the Chinese one as a regional history.

SINOCENTRISM 1940–1990

After the end of Japanese colonization, in 1945, the KMT, a political party in power on mainland China, took over Taiwan. The national curriculum was dominantly occupied by a pan-China identity and cultural China identity (Doong, 2008; Tsai, 2002). During the presidency of Chiang Kai-shek and his son, Chiang Ching-kuo, education was made compulsory in Taiwan and extended from a compulsory six years to nine years; the latter enacted with *Curriculum Standards* produced by the MoE. The standards are detailed guidelines for principals and schoolteachers on how to run their schools and teach in their classrooms. The aim of education was printed boldly on workbook covers' "to be an active student, to be a righteous Chinese" (做個活活潑潑的好學生/做個堂堂正正中國人)

(n.d.). Embedded in the national curriculum at that time was an ideological underpinning of patriotism towards China.

In textbooks designed with such pan-China identity, the territorial claim in geography not only included Taiwan and surrounding islands (Penghu, Kinmen, and Matsu) but also the Mainland, with the 5,000-year Chinese history emphasized (Doong, 2008). Built upon these geographical and historical claims, the symbolic significance and institution of the Republic of China (ROC) that was established in 1911 were rationalized and legitimized. The cultural Chinese identity emphasised the close relationship between Taiwan and the Mainland in terms of consanguinity, national sentiments, and cultural similarities, and constructs the identity towards Chinese culture as a whole; usually, the excellence and exquisiteness of Chinese culture was stressed.

TAIWANCENTRISM 1990–2000

During the time of the presidency of Lee Teng-hui and in the beginning of the presidency of Chen Shui-bian, the first Democratic Progressive Party (DPP) president, there emerged pressure from society for deregulation and indigenization in education. The "Getting to Know Taiwan" (*Renshi Taiwan*, 認識台灣), a three-volume official textbook was produced, published, and used in junior high schools in the 1990s. In 2001, in response to societal pressure, the new national curriculum *Grades 1–9 Curriculum for Elementary and Junior High School Education* (MoE, 1998) was introduced. Curriculum guidelines were introduced in place of the *Curriculum Standards*. In the new curriculum, the territory of the ROC is delimited as Taiwan and surrounding islands (Doong, 2008). The curriculum acknowledges the fact of separate governance between China and Taiwan and claimed that students should be cultivated as citizens who have "feet on Taiwan, reminiscence of Mainland China and eyes on the world" (MoE, 1994).

Such an imagination of community was designated as a concentric circular historical conception (*tongxinyuan shiguan*, 同心圓史觀), which was developed by Tu (2004), a historian who later became the Minister of Education in 2004–2008 in Taiwan. He argued that what geographically surrounds students should be taught first and, in most detail, and the more peripheral knowledge should be taught later and granted less significance. He suggests, from the inner to the outer circle, putting local history in the centre, arranging Taiwanese history in the second circle, and Chinese history as the third. The fourth circle is Asian history, which is followed by the fifth circle of world history. Tu's (2004) subjectification of the local and Taiwanese identity was accused of de-Sinicization in education that attempted to pursue Taiwanese independence and to eliminate the cultural influences of China (Li, 2008; Liu & Hung, 2010). The critics, especially from the perspectives of the pro-reunion camp, argued that, by subjecting Taiwan, Tu makes Taiwanese history a national history rather than a local history under the grand Chinese narrative (Peng, 2004).

However, Tu refutes the accusation and contends that the concentric circles he created are more a historical conception of a separate China rather than that of an independent Taiwan (Han, 2016). For Tu (2004), the Sinocentric worldview failed because of its ignorance of the multicultural facets within Chinese nationalism, the chauvinism of the Han civilization, and the local characteristics of Taiwan. Therefore, he suggests putting the knowledge of China back into its position in Asia and in the world and establishing new historical perspectives. These new historical perspectives can thus "broaden the

worldview of students and form profound historical viewpoints and build students' international competitiveness" (Tu, 2004, p. 72). What is evident here is the intentional revelation of the tension between localization and globalization/internationalization. Under the Sinocentric worldview, Taiwancentrism was regarded as localism and parochialism. Tu (2004) acts against the notion by taking up a multiculturalist rhetoric. Through deconstructing Sinocentrism—or the Chinese identity—with a multicultural perspective, he asserts that Taiwancentrism would not be regarded as merely a localism.

OBJECTION AGAINST SINOCENTRIC WITHDRAWAL

With the election of Ma Ying-jeou to the position of President, the KMT returned to power in May 2009. The MoE put off the issue of *98 Curriculum Guidelines*, which had been planned for implementation in September 2009, and claimed that the senior high school curriculum guidelines needed to be reviewed again because of contentious content in the Chinese and history curriculum (Yang & Hung, 2016). For such a revisionist agenda, the MoE set up a project group to oversee the original curriculum review committee, which was accused of being biased by academics, historians, educators, and parents. In the formation of the project group, most scholars specialized in Taiwanese history were replaced by those specializing in Chinese history (W.-y. Chou, 2015). Furthermore, the committee set up to author the history textbook was not formed by historians but by academics of political science who had pro-China stances. The controversial additional editions and revisions to the curriculum guidelines and textbooks were not declared and explained by the MoE until they were unveiled and spread in Chou's blog article (cf. W.-y. Chou, 2015) and read by the public.

The MoE rationalized the initiative by claiming that the adjustments were not substantial. It contended that the modification of curriculum guidelines was an administrative act rather a legislative one (Hsiao, 2015), and the project group and textbook review committees were only temporary appointments (Yang & Hung, 2016). However, these declarations did not convince the public, especially not the stakeholders of the history curriculum. After the spread of Chou's Facebook post on 1 February 2014, individuals and associations of schoolteachers who taught history and social studies joined to protest against the curriculum revision.

The Apple Tree Commune Club (ATCC), whose members are mostly students in National Taichung First Senior High School, was one of the first student unions to boycott the revisions in public. On 1 May 2015, they organized a protest event against the curriculum revision on the 100th school anniversary in National Taichung First Senior High School, a prestigious and historic senior high school in the middle of Taiwan island. The event quickly spread throughout Taiwan and inspired students in other districts to line up and express their objections in public.

The best-known alliance was the Anti-Black Box Curriculum Alliance, a union established in 2015 by high school students to object to and call for protests against the reviews of the history curriculum and textbooks. Some former curriculum review committee members, academics, and schoolteachers also joined the protest. Several civil societies, such as the Humanistic Education Foundation, Taiwan Association for Human Rights, National Alliance of Presidents of Parents Associations, Civics Teachers Action Alliance, and History Teachers' Engagement Union, together started the Anti-Black Box Curriculum Alliance. In the midst of the protest, one of the students chose to end his own

life to call for wider public attention to the unjust government decisions on the history curriculum (Hioe, 2015). In order to boycott the curriculum revision, the Anti-Black Box Curriculum Alliance organized a protest to occupy the MoE and contended they were acting upon the spirit of citizen disobedience. Their concerns over the new revisions were two-fold: they argued that the process of making the revisions was opaque, lacked legitimacy, and was without enough societal consensus; they argued the new revision on the content of the history curriculum was not insubstantial, as claimed by the MoE, but leads the curriculum towards de-Taiwanization. After a one-week sit-in outside of the MoE, the students chose to disband because of the threat of a typhoon.

Later that year, Tsai Ing-wen won the presidential election and became the second DPP president since May 2016. The new government announced an administrative ordinance to abolish the previous curriculum revision (The Executive Yuan Gazette, 2016). Amendments of the *Senior High School Education Act 2016* and the *Primary and Junior High School Act 2016* were also passed to legislatively confirm students' rights to participate in the curriculum review committee.

STUDENT INVOLVEMENT IN NEGOTIATING OFFICIAL KNOWLEDGE

Although regarded as the focus of education, students are rarely allowed to take part in making decisions about what they learn at school. According to Yang and Hung (2016), teacher representatives, parent representatives, and social association representatives have joined the curriculum review committee since the 1990s. Student participation was once discussed and called for action in a consultation conference in 2004, but the opportunities are few.

For instance, in the curriculum development committee set up during 2004–2005, one of 39 committee members represented students, and during 2006–2007, only one out of 50 was a student. It is not clear whether these students were allowed to join as committee members and student representatives or as social association representatives. At the time, the students belonged to the High School Student Rights Association (中學生學生權利促進會, HSRA), which had become a registered social association in 2003 (People organisations worldwide web, 2015; Yang & Hung, 2016). As well, student representatives were only allowed to participate in the development committee for the *General Curriculum Guideline*. At this stage, the student representatives on the committee represented were only a façade of a democratic process. They were not given enough opportunity to make meaningful contributions for change because of professional concerns.

Yang and Hung (2016) explain that because of concerns for the need to make professional decisions, committees set up for individual subjects used to meet without any student representatives. Thus, opportunities for students to contribute to negotiations and discussions of what to teach in schools were few and restricted. In creating 'official knowledge,' students were thought not to have sufficient capabilities so that they were less represented. The under representation does not mean Taiwanese students are indifferent to their rights. As mentioned above, some students managed to take part in the policy-making process through organizing social associations, such as the HSRA, and succeeded in participating in the education reform initiatives (Huang, 2003). Although not given enough power, students act actively to empower themselves in order to participate in the negotiation of the national curriculum.

FROM READING GROUPS TO PROTEST ALLIANCES

ACTT is a student club in National Taichung First Senior High School born from another activity spontaneously and regularly held by local students in Taichung, called the Nights in Mingsin Hall. Named after a building in National Taichung First Senior High School, it is an activity that students, sometimes teachers included, read, talk, and stay together every Thursday evening (Liao, 2018). They share with each other what concerns them in their daily lives and invite people from outside of the school to give lectures and lead discussions. Together, they engage in a wide range of reading, from literary works to sociologies, and make contact with people, including academics, politicians, local historians, and artists. They are interested in issues ranging from the Yugoslav wars to Taiwanese indigenous cultures and land justice. The event provides students with an opportunity to think and reflect on things that happen around the world and around them.

From time to time, there are more senior high school students in Taichung attending the Thursday night event. Some of them also participate in the operation of student unions as well as student parliaments in their own schools. And sometimes, it becomes an occasion that students from different schools discuss and exchange with each other the experiences of fighting for student rights in high schools. The networking becomes a base for setting up associations like the ACTT and the Anti-Black Box Curriculum Alliance after the outbreak of protest against curriculum revision.

STUDENT MOVEMENTS IN TAIWAN

Noticeable when studying the earlier student participation in the making of the national curriculum—the case of HSRA, to the latter student associations—like ACTT is that organizations have become more localized and membership is younger. While the members of HSRA are mostly university students who care about secondary school students' rights, the members of ACTT themselves are secondary school students. These later student associations tend to claim their local bases and their local links, such as ACTT, Northern Taiwan Anti-Curriculum Revision Secondary School Association, Taoyuan Secondary School Association, and Eastern Taiwan Secondary School Association. One of the students mentioned in an interview that "my school was established under Japanese colonization by local elites due to their local identity (against Japanese national identity). It is a school tradition to be concerned about what happen in the society and to take part in social movements" (Chen, 2017, p. 74).

Apart from the traditions of individual schools, there is also a tradition of student movements and activisms in reacting and responding to critical social issues along with the development of democracy in Taiwan. In 1990, the Wild Lily student movement gathered thousands of university students at a sit-in at Chiang Kai-shek Memorial Hall, Taipei, demonstrating for the popular election of all representatives of the National Assembly. The Wild Strawberry student movement in 2008 held sit-in demonstrations throughout Taiwan, claiming that police conduct against the people during the China governmental representatives' visit are against human rights. The most recent instance is the Sunflower Student Movement in 2014, in which university students, research students, and civil groups occupied the parliament for 23 days, protesting against intimate economic cooperation with China without public supervision. The movement successfully stopped the Ma Ying-jeou government from signing a Cross-Strait Service Trade Agreement with

China. For high school students participating in the Anti-Black Box Curriculum Alliance, "they'd like to have their own demonstration and to protect their own rights" (F.-y. Chou, 2017, p. 198). The student movement experiences are passed down from generation to generation, and students are inspired by each other.

SHAPING IMAGINED COMMUNITIES

As the naming suggests, the protest by the Anti-Black Box Curriculum Alliance pursued anti-black box and anti-brainwashing. While the "anti-black box" aims to advance procedural justice in curriculum review, the "anti-brainwash" pursuit is against de-Taiwanization (F.-y. Chou, 2017). In other words, the protests are not only against the paternalism in the creation of the national curriculum but also about expressing the youth's imagination of the national community. Sinocentrism is considered, by these students, as working towards de-Taiwanization and brainwashing. In other words, the Chinese cultural legacies and prestige are no longer at the centre of their imagination of the national community.

It might be of worth noting that, despite the growth of self-determination in the young generations, these student activists are not necessarily ideologically in opposition to the older generations affected by the previous Sinocentric education. There were still disagreements on how to deal with the Chinese elements in the geographical imaginary. The central opposition lies in the disfunction of the democratic process in terms of curriculum revision (Liao, 2018).

The recognition of Taiwan and Taiwancentrism does not mean anti-Chinese cultural heritage for the young generation. Rather, what binds them together is a strong agreement and respect for the fact that Taiwan is a multicultural society and everyone's cultural identity should be respected. The point is to keep on discussing and leaving it to open dialogues rather than arriving at a fixed conclusion. The national curriculum is, itself, a political action and is about passing down political ideologies; there is no way for education to be depoliticized (Chen, 2017). To these young people, the imagined communal community is more inclusive than being exclusively Chinese or exclusively Taiwanese. As one of the student representatives stated in a recent curriculum review committee meeting:

> We were always talking about if the curriculum de-Sinicization or pro-Taiwan independence, or the Great Chinese perspectives, of course I know this is compulsory education for every national . . . It is not that if we interpret the history from the indigenous perspectives then it would become single ethnical history . . . The point is that we should try to put ourselves in others' shoes. (MoE, 2018, Xiao's statement).

DISCUSSION

Through the conceptualization of the imagined community (Anderson, 1983/2006) and official knowledge (Apple, 2014), this paper investigates the politics of the formation of the national curriculum and its representations of the national community. In a Sinocentric perspective, genuine Chinese culture and virtues are emphasized. Students are usually regarded purely as learners and receivers of the curriculum which adult/experts edit and arrange for them. However, along with the development of democracy and Taiwanese subjectivity, the Sinocentric worldview as well as the legitimacy of official knowledge become problematic and questionable. In the movement led by the Anti-Black Box

Curriculum Association, what is clear is students' challenge to the legitimacy of former Sinocentric official knowledge. To the new generations, the legitimacy of the national curriculum should be built on democratic participation and inclusive and multicultural representation.

In his work on recent Taiwanese demonstrations, Cole (2015) depicts Taiwanese developing patriotism as a new brand of "civic nationalism." Different from the old ethnicity-based nationalism, it is related more to "shared values, a way of life, and the country's democratic system" (p. 8). In the context of Taiwan's complicated geopolitics with China the nation sits in an ambiguous status of liminality, an unstable and disintegrated relationship between society and nation state (Wang, 2010). In confronting China's attempt at eliminating Taiwan's independence, Taiwan's niche is its pursuit of being 'as a state that avoids identification with a nation, but emphasizes, instead, its political virtue', an idea arguably close to Habermas's notion of "constitutional patriotism" (Rigger, 2002, p. 354). To the high school students who fought for better participation and representation in making the national curriculum, the imagined community represented in the curriculum should be a democratic and multicultural one, which empowers the youth to act against the dominance of official knowledge.

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Open architecture curriculum: Towards an education committed to pluralist democracy

Rodrigo Travitzki
Universidade de São Paulo, Brazil: *r.travitzki@gmail.com*
Lilian L'Abbate Kelian
Universidade de São Paulo, Brazil: *lilianlkelian@gmail.com*

This paper aims to identify elements that will help with the process of thinking through curriculum issues based on the concept of open architecture. We argue that this concept can be an interesting driver of practice and debate concerning curriculum development in different contexts. More generally, we seek for viable public education that is more deeply committed to pluralist democracy; a pluralism with some consensus, but not on everything, as argued by Chantal Mouffe, in support of Paulo Freire's claim that no one frees anyone alone but in communion. The paper describes origin of open architecture in computing, highlighting the free software movement. Then, we briefly discuss the transposition of this concept to the educational field. We also describe some communities for practice and innovation. Teacher communities should be the main foundation of the open architecture curriculum. Teachers should be transformative intellectuals with the responsibility, among others, to listen to student voices. Finally, we describe examples of the open architecture curriculum, some real, some imaginary. The concept of open architecture can also help when conducting comparative studies to enable a better understanding of curricular differences between nations, particularly with regard to flexibilization and centralization policies.

Keywords: curriculum theory; education policy; pluralism; open architecture; collaborative community

INTRODUCTION

No one frees anyone, no one frees himself: men liberate themselves in communion . . . No one educates anyone—no one educates himself—men educate one another, mediated by the world. (Freire, 1987)

What should people learn? What do new generations need to know before being fully active in society? How can we emancipate the people, or help them to emancipate themselves? Or maybe, more importantly, who is this "we"? Who is the entity that is trying to determine the answers to these questions on behalf of all others? Optimistically, we could be a group of teachers who are experts in several fields and from different communities but enjoying ideal conditions of communication, having a common interest and similar reasoning. We have the time and resources to create and update the national curriculum, and will not let personal interests distort the decision-making process. The premise implicit in the first three sentences is that it is possible to create a unique curriculum that makes sense for all people (e.g., in a country), and enables them to not

only to be included in society but to enjoy increased emancipation and self-realization. Using Habermas's (1992) terms, such a unique and universal curriculum is the outcome of a consensus generated in a healthy deliberative democracy.

Around the world, countries have different approaches to curriculum issues. Some countries have a more centralized and detailed approach, and others have a more flexible and generalist approach. Brazil is now completing a national curriculum that imitates the US *Common Core* curriculum and aims to guide the details of educational activities, such as textbook production, standard assessments, and everyday life in the classroom. The idea behind the curriculum design is that educators need more information about what to teach and how to teach, and also more "incentives" (or pressure) to do a good job. Additionally, as this information is more needed in poor communities, this standardization policy should be an effective way to deal with the reproduction problem, as described by, e.g., Bourdieu, & Passeron (1992)Coleman, "No child left behind," that's the idea, or at least a simplification of an explanation for this kind of public policy. However, its efficiency remains unclear, and some of its old defenders are now harsh critics (Ravitch, 2010).

> School Improvement, in neoliberal environments such as England, has intensified schooling rather than transforming education. It has led to speeding up the conveyor belt of transmission teaching, rather than a development of new social constructivist pedagogies. It is not surprising that fifteen years of such "improvement" has left a massive gap between the attainment of the poorest and most advantaged sections of the population. (Wrigley, 2005, p. 315)

In this paper, we argue that this common curriculum issue could be dealt with without the imposition of a universal reason related to standard assessments and mass teaching. We present no pragmatic solutions, just a conceptual tool that might help to deal with these—and other—curricular problems attuned to a perspective more related to education and culture and less driven by market interests. The tool we suggest is the "open architecture" way of structuring human actions and interactions, which leaves a large space for freedom and creativity without compromising compatibility and efficiency. The tool, or concept, is usually associated with buildings, hardware, and software. It has also been applied to education with regard to pedagogical methods, as Dewey and Kirkpatrick projects (Wrigley, 2005). More generally, our aim is to propose a way towards a kind of education more deeply related to pluralist democracy.

CURRICULUM, DEMOCRACY, AND PLURALITY

Curriculum issues are not mere technical educational details: they include political fields of struggle. In the Brazilian context, some details of this political dimension of the curricular issues are described by Miguel Arroyo (2014) and, in a broader sense, it has been addressed by Paulo Freire (1987). In a similar way, we assume that

> [A]s a starting point for assessing any discourse labelled as curriculum theory, the deeper political grammar that structures its view of power, sexuality and history, human nature and the future would be openly engaged and subject to critical analysis as a form of political discourse (Aronowitz & Giroux, 2003, p. 140).

Assuming that the curriculum is a form of political discourse—an important field of political (and ideological) dispute—we need to conceive of it in democratic

contemporary perspectives, which leads us to the debate concerning democracy between Jürgen Habermas (1992) and Chantal Mouffe (1996). Both authors were looking for a kind of democracy in which decision-making processes take into account human cultural diversity and avoid economic inequality. However, Mouffe (1996) refutes "Habermas's claim that there exists a necessary link between universalism, rationalism and modern democracy and that constitutional democracy represents a moment in the unfolding of reason, linked to the emergence of universalist forms of law and morality" (1996, p. 1). Her perspective, she claims, is aligned to Richard Rorty and Jacques Derrida, denying the "availability of an Archimedean point—such as Reason—that could guarantee the possibility of a mode of argumentation that would have transcended its particular conditions of enunciation" (1996, p. 1).

The centre of Mouffe's critique of Habermas's approach is the possibility of a consensus without exclusion. She claims that "when we accept that every consensus exists as a temporary result of a provisional hegemony, as a stabilization of power, and that it always entails some form of exclusion, we can begin to envisage democratic politics in a different way" (1996, p. 11). In order to undermine Habermas's concept of consensus, Mouffe (1999) refers to Wittgenstein, for whom "to have agreement in opinions there must first be agreement on the language used and this, as he points out, implies agreement in forms of life" (1999, p. 479).

If agreement is not established on significations but on forms of life, what should the democratic decision-making process be in a society with different forms of life? In Mouffe's (1999) perspective, "the novelty of democratic politics is not the overcoming of this us/them distinction" (1999, p. 755), because the existence of antagonist interests is constitutive of modern societies. There is always some discrimination between us and them, the point is how to establish it "in a way that is compatible with pluralist democracy" (1999, p. 755). In Mouffe's view, this could be reached in an agonistic pluralism, a concept that starts refusing the universal reason (or universal subject) one important foundation of Habermas's model of deliberative democracy.

> Modern democracy's specificity lies in the recognition and legitimation of conflict and the refusal to suppress it by imposing an authoritarian order. Breaking with the symbolic representation of society as an organic body—which is characteristic of the holistic mode of social organisation—a democratic society makes room for the expression of conflicting interests and values (Mouffe, 1999, p. 756).

Mouffe's idea of a pluralist democracy "demands a certain amount of consensus, but such a consensus concerns only some ethico-political principles" (1999, p. 756). And, even in these cases, she claims, the different and conflicting interpretations of the same principles could generate no more than a "conflictual consensus."

Stanley Aronowitz and Henry Giroux (2003) have a similar perspective with regard to curriculum issues that are more philosophically aligned with Dewey (2004) and Freire (1987). They are also worried about pluralist democracy but refute Habermas's faith in "a rationality which believes in the possibility of separating science from ideology to be another form of ideology" (p. 38). According to Aronowitz and Giroux (2003):

> Far from being treated as "objective" and as something simply to be mastered, knowledge claims that emerge within the curriculum would be analysed as part of a wider struggle over different orders of representation, conflicting forms of cultural experience, and diverse visions of the future. Underlying this view of curriculum

> theory lies the important task of helping students rethink both the democratic possibilities within schools and the wider society of which they are a part (p. 141)

Giroux and Mclaren (1986) claim that this view of education is in retreat since the introduction of neoliberal policies in 1980. They claim that nowadays there is

> Little concern with how public education could better serve the interests of diverse groups of students by enabling them to understand and gain some control over the socio-political forces that influence their destinies. Rather, via this new discourse, and its preoccupation with accountability schemes, testing, accreditation, and credentializing, educational reform has become synonymous with turning schools into "company stores." It now defines school life primarily by measuring its utility against its contribution to economic growth and cultural uniformity. (p. 218)

In this perspective, the curriculum is not influenced by teachers anymore but is mainly in the hands of administrative experts. In more extreme cases, Giroux and Mclaren claim, the curriculum is pre-packaged and designed to be "teacher-proof," to be applied in any classroom regardless the sociocultural context. Giroux and Mclaren perspective, which seems to be aligned with Mouffe's one, is not driven by cultural uniformity. Giroux and Aronowitz define a number of theoretical categories that could help to rethink curriculum discourse and practice: "1) an expanded notion of the political, (2) an attempt to link the languages of critique and possibility, (3) a discourse which views teachers as intellectuals, (4) and a reformulation of the relationship between theory and practice" (p. 140)

With regard to our goals in this paper, Giroux and Mclaren provide important concepts. First, the teacher must be considered as a "transformative intellectual" because "schooling represents both a struggle for meaning and a struggle over power relations" (Giroux & Mclaren, 1986, p. 215). It means that teaching and learning must be inserted in the political sphere. But this is not the same as viewing teachers as political activists or indoctrinators. Giroux and Mclaren (1986) argue that teachers must learn to listen to students' voice:

> Teachers must assume a pedagogical responsibility for attempting to understand the relationships and forces that influence their students outside of the immediate context of the classroom. This responsibility requires teachers to develop their curricula and pedagogical practices around those community traditions, histories, and forms of knowledge that are often ignored within the dominant school culture. This can, of course, lead to a deeper understanding on the part of both teachers and students of how both "local" and "official" knowledges get produced, sustained, and legitimated. (p. 236)

In a psychological perspective, this deeper understanding is related to the notion of active desire, described by Juliana Merçon (2013) in Spinozan terms.[1] Such a perspective is not the focus of this paper, it is detailed in Kelian & Travitzki (in press). The central point is how to conceive democratic participation in the educational field. Conceiving teachers as intellectuals with political roles does not mean corrupting education but taking it seriously in contemporary democratic contexts. Similarly, listening to students voices does not mean doing only what children want to do. It is

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[1] "The activity [of desire] consists in the understanding of how we are determined by things, that is, in knowing the series of causes of our appetite and affections. Whereas reason is never only a cognitive process, but always also affective, in its activity it transforms our desire." (Merçon, 2013, p. 39)

important to go beyond strategies that simply ask the student at the beginning of the year: "What do you want to study?" and then doing, for example, a course in robotics because the student answered that he likes technology. We seek a more complex and enduring form of openness, a state of permanent listening that mobilizes many forms of subjects' expressions (their life history, their family culture, their political vision, their corporal organization, their language through drawing, oral narratives/written/technological, etc.). Such reflections are central to the debate about curriculum flexibilization as a solution to the lack of interest of young people in school activities.

WHAT IS OPEN ARCHITECTURE?

This term is usually associated with computing, either software or hardware, and collaborative projects. Open architecture is present in our lives in a variety of ways, such as in the personal computer and most Internet servers (based on Apache). According to Paul Wright, (1995), "open-architecture manufacturing systems may be defined as exhibiting: (a) connectivity between subsystems, (b) availability to a broad set of users, (c) expandability of both hardware and software, and (d) portability of software from one subsystem to another" (p. 200). Wright was talking about how to build computers but also pointing out a number of general principles of open architecture. The challenge is how to create flexible factory systems which easily convert ideas to precise mechanisms with quality assurance during the process. The success seems to depend on the "manufacturing languages, common data structures, compatible operating systems, and common bus structures for machine tools and other processing agents in the factory" (Wright, 1995, p. 187).

Taking a similar perspective, we consider the term "architecture" in the sense of a "habitable structure." "Structure" because there are common principles and specific forms of relationships between the elements. "Habitable" because this kind of structure does not make sense by itself, it only exists because it accommodates, within itself, several subjects in activity and interaction. An architecture is "open" if it can not only be inhabited but also be transformed by its inhabitants though always maintaining some structure. It must be permeable to elements external to itself, it must allow and facilitate adaptations and changes, eventually in the very foundations of the architecture. Thus, an architecture that proclaims itself as habitable for everyone but does not allow its inhabitants to make adaptations/modifications will not be considered here as an open architecture.

Therefore, an open architecture is a way of organizing environments of human interaction (real, virtual, conceptual) that seek to maximize collaborative action and collective construction of solutions and knowledge without supposing a universal subject—that is, a homogeneous subjectivity, a single perspective about being a human being. To do so, an open architecture must be designed with some basic principles: transparency, intelligibility, availability, flexibility, ability to incorporate the new/different, and coexistence of general standards and heterogeneity. To allow a better understanding of the open architecture, we present concrete examples of this concept.

HARDWARE OPEN ARCHITECTURE

The first computers were large and did not even have software in the sense that we know today: their physical structure dictated how to process information. Over time, computers became "multitaskers," smaller, though still expensive and still impossible to use every day. It was in 1981 that an IBM project (IBM PC) decided to create a low-cost computer. To this end, the designers chose to use standardized components already available in the market and, therefore, subject to free competition with no royalties. The idea was to produce an effective structure with the available electronic components, leaving only one protected component that would be produced only by IBM. This was an essential component for the integration of others (the BIOS), so the idea was to make some profit. But the initiative did not yield as IBM expected because other companies were able to produce similar BIOS, making PCs completely independent of IBM. From then on, the architecture created came to be called 'IBM PC compatible' and virtually all industries (except Apple) started to use it to produce personal computers. As a result, most computers we use today are based on an open architecture. The success of the IBM PC in the market of personal computers, hitherto dominated by Apple, can be explained in two ways: 1) the effectiveness and stability of the architecture created; and 2) the fact that the architecture is open (in technical and legal ways).

SOFTWARE OPEN ARCHITECTURE

The software industry follows the general rule of charging for products and innovations, usually in the form of a (usually temporary) licence of use. In addition to the fees charged, there is a second aspect that can "close" a software item: the non-disclosure of source code. Source code is what the programmer writes so it makes sense to a human being. When the manufacturer does not want to be copied or even understood, he only discloses the machine-readable code (basically zeros and ones). So, the software may work pretty well, but no one knows how.

The closed architecture of the software market began to be opened with the GNU Manifesto, published by Richard Stallman in 1985. He and several collaborators were engaged in building an operating system similar to Unix but open. In fact, the term GNU means: 'Gnu is Not Unix'. There were even legal challenges at the time, (e.g., related to copyright). To address this problem, Stallman created a licence for GNU, which he dubbed "copyleft" or GPL. The GPL licence, used to date, is based on four principles, the freedoms to:
1.	run the program for any purpose;
2.	study the program and adapt it to your needs;
3.	distribute copies of the program to help others; and
4.	improve the program and distribute the improved copies to benefit the community.

The GNU system was almost ready but there were still issues related to its kernel, that is, the part of the software that communicates with the hardware. It was in 1991 that Linus Torvalds created Linux, which became the core of GNU. Nowadays, the GNU/Linux operating system (popularly known as Linux) is widely used in Internet servers and scientific laboratory computers, although it is still rare among "ordinary" users. It is, in any case, the most used free operating system, with a community growth each year promoting improvement, stability, and diversity.

There are several "Linux distributions" available to anyone today on the Internet. Some are for general use others are specialized in multimedia, others are adapted for less powerful computers or for more security, etc. There is also considerable compatibility among the distributions because they are all based on the same open architecture: the GNU/Linux operating system.

The Linux community is mostly made up of users who benefit from the software created and made free by the small group of creators (the programmers) and also function as a software secondary testing system. So, there is a gain-gain relationship here. Any user can choose any distributor (or more than one) and any software available on the distribution repository. With no or few programming skills, a person can customize. With a little more knowledge a person can make their creations free to everyone. There are several structures on the Web that allows this kind of collective work, with different distributions, different programs, several versions of each one, several people contributing, and all working amicably. Of course, there are many problems and "bugs," as with any software, but the point here is that we already have the technological basis to manage complex and collective projects with transparency, flexibility, and efficiency, and integrating global and local features.

If we can do it with software, why could we not do it with a national curriculum? It is not a simple task, of course. However, more inspiration can be found in other free software communities: for example, the users of R statistic language. There are, of course few people in that society but, among statistics researchers, they are probably less rare than the Linux users among all people. The R software is a multi-platform, that is, it functions on Linux, Windows, and Apple systems. As with Linux, R is free to use, customize, and distribute, even with commercial finality. More than that, to use R you need to know something about statistics and the interaction with R can itself be a great form of learning both programming and statistics. This is because the R language has great affordance, it is written in clear English and all functions are provided with a standardized help menu, which is very useful for both beginners and experts. All these aspects are related to the open architecture and maybe they can help us to reframe curriculum issues.

LEARNING AND INNOVATING IN COMMUNITIES

The success of open architecture depends on the community acting and interacting in it, (re)building it while living in it. If we are talking about teachers in curriculum communities, there are at least two main features we should expect in these communities: the abilities to promote learning; and creativity at individual and collective levels. Teacher learning communities could be based on:

> What Dewey (1970) imagined years ago—a laboratory model for schools where teachers engage in collective inquiry in order to weigh their practices and innovations against empirical evidence and critical dialogue. Built on his broad conception of science and empirical data, Dewey's approach included systematic observations and analyses, conducted by teachers, of learning and teaching in classrooms. The process, he argued, ought to include focused professional conversations among colleagues, which in turn stimulate innovation and further inquiry. This spiralling process would culminate in ongoing construction of knowledge from practice (Wood, 2007, p. 282).

The main goal here is to improve teaching practice at the individual and collective levels. Open architecture thinking can help to provide an environment where each teacher can easily find, customize, and eventually create what is needed (an educational resource, a pedagogic method, an educational law). The environment must also allow teachers to debate, for example, how to use a specific educational resource, how to teach a specific content or skill, or even how to interpret a law. Like an Internet forum, but somewhat more structured by the ontologies (a kind of hyper-dictionary), which can incorporate specific educational features in a general and flexible form. Moreover, if the idea is to improve teaching and not to sell textbooks, this environment must accumulate knowledge in a transparent way, avoiding fake changes or duplications, and without losing information. In that way, it will not be necessary for a teacher to do the same work twice or more. At the collective level, this means a qualitative change.

Such an environment should provide efficient, democratic, and low-cost support to continuous teacher formation and refreshing. Moreover, it can help not only the users but also the creators of educational resources. In open architecture, creators must have a place and a good place. In this sense, it must be possible not only to customize the resources, but also to create totally new ones. Actually, if the idea is to build a kind of free curriculum (like the free software), the creators are the mainstay of the open architecture system.

Nevertheless, one could ask about the quality of the educational resources produced in such an environment. Could this kind of "autonomous creation" produce good resources without any company or some kind of centralization?

> Imagine product development without manufacturers. Today's user innovation communities are making that idea increasingly real. Open source software projects, among others, have led to innovation, development and consumption communities run completely by and for users. Such communities have a great advantage over the manufacturer-centered development systems that have been the mainstay of commerce for hundreds of years. Each using entity, whether an individual or a corporation, is able to create exactly what it wants without requiring a manufacturer to act as its agent (Von Hippel, 2001, p. 82).

Von Hippel (2001) describes two examples of successful products made by user innovation communities: the high-performance Windsurf equipment and the Apache software (part of most Internet servers). He highlights some similarities between the two cases:

- communities with many people participating voluntarily around common interests;
- spaces of exchanges and interactions are necessary: in the first case they are physical spaces, for which the athletes travel to practice and exchange experiences, in the second case it is the Internet; and
- the majority of participants in the communities are not really innovative, limiting themselves to use the solutions created by a minority that decides to make their innovations public and free.

Von Hippel is trying to understand this kind of collective creation in an economic view. So, one of the first questions is why (or under what conditions) does somebody decide to reveal and free his own creations, made with effort and investments. From an economic perspective, it means "when their benefits outweigh their costs. In the case of

user innovation communities, the costs of revealing are generally low" (Von Hippel, 2001, p. 85). When the costs are low (e.g., in the case of software), any tiny potential benefit would be enough to stimulate users to reveal their creations.

> [W]hat is most exciting is that innovation communities composed of users and for users, communities that according to traditional economic views shouldn't exist, work well enough to create and sustain complex innovations without any manufacturer involvement. This means that in at least some, and probably in many, fields users can build, consume and support innovations on their own (Von Hippel, 2001, p. 86).

Could the curriculum, in its broader sense, be one of these fields? It seems possible, taking into account that a large part of what we call curriculum can be converted to virtual objects (hence with very low costs of reproduction, modification, and distribution), and that teaching is a very specialized activity, which should work better—in the classroom everyday life—with customizable tools than with standardized mass methods.

OPEN ARCHITECTURE CURRICULUM

How can these examples help us to think about curriculum in the contemporary world? In transposing the concept of open architecture into the curriculum problem, we hope to contribute to resolving some issues in formal education, such as: the need to articulate unity and diversity in the curriculum; the distance between school and the state-of-the-art in pedagogic theory; the isolation of innovative schools; the isolation between schools; the isolation between disciplines; the lack of stimulus to innovation in loco; the lack of structured communities that can foster a culture of exchange and improvement of teaching work; and the need for constant teacher refreshing.

Actually, open architecture does not solve any of these issues. It is just a generic concept that still needs to be defined in educational terms. Even so, it can be an interesting driver to imagine curriculum solutions. The kind of solution that arises around this concept may contribute to many aspects of education, shifting the focus from "improve individual performances" to the collective construction of knowledge about education and about ourselves.

We consider an open architecture as a structure that can be inhabited by all interested people and also modified by such people. In philosophical terms, this is a perspective aligned with Mouffe and, when applied to education and curriculum, with the ideas of Freire and Giroux. The concept of open architecture contains a number of key features:

- transparency as accessibility (which includes cost and distribution) and intelligibility;
- standards of information, that allows communication, internal memory and compatibility;
- openness as the ability to incorporate the new, so the inhabitants can modify the structure;
- coexistence of heterogeneity and unity;
- easy to deal with and friendly, in order to promote large participation; and

- affordance, as an open way to incorporate intelligence on objects,[2] because one can easily learn how to use them.

There are several ways of defining these features and other forms of relating them to curriculum design. Some possible (and potentially inspiring) relationships between the concept of open architecture and the curriculum are:

1. curricular language understandable by the students (if possible, multilevel language);
2. educational activities with explicit objectives;
3. teachers are the users and main creators of the curriculum, they have formation communities to maintain and improve professional quality, and they listen to students' voices to promote meaningful education at personal and collective levels;
4. educational objects with free licence and permanent link, also related to some ontology[3] from the architecture. This can avoid unnecessary work for experienced teachers, and also allows long-term knowledge accumulation in the field;
5. ontology structure should be centred on the educational objectives, because we assume that the curriculum is a kind of political (and intentional) discourse;
6. ontologies are in permanent construction, elaborated preferably with more than one description for each concept, varying the language (hence the content) complexity; and
7. public school systems should be a general open structure that also allows local "closed" architectures if teachers want to create solutions but not publicize or systematize them (yet, maybe).

These are some promising examples, in our view. And there are three more cases (more complex relationships between open architecture and curriculum design) which are worth mentioning in this preliminary essay. The first case can be labelled as open pedagogies, from Dewey to Freire. They refer mostly to everyday classroom life, although related to causes and consequences from outside the school. The second case is known as Open Educational Resources. And the third case is what we consider a plausible (although still generic and not well defined) alternative for the "common core" large-scale curriculum solution with regard to public school national (or state) systems. These cases are described in the following sections.

Open pedagogies

There is a long tradition—since Dewey and perhaps Rousseau—in the debate and practice of more democratic and flexible forms of teaching. For didactic purposes, Janet Soler and Linda Miller (2003) identified three typical examples of curriculum, differing in the position in a continuum[4] defined by two extremes: one refers to more centralization, homogeneity and prior defined details, while the other extreme is the opposite.

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[2] In a sense described, for example, by Dennett (1996).

[3] In this paper we refer to "ontology" in the context of the semantic web (as a digital dictionary), not in the philosophical sense.

[4] "A continuum ranging from localised, individualised models through to centralised goal-oriented frameworks" (Soler & Miller, 2003).

> The Foundation Stage Curriculum in England is an example of a centralised, competency-oriented curriculum, as it establishes and specifies national educational goals and content in advance. An alternative viewpoint argues for more localised and individualised models, generated to meet local needs in order to support collaborative community visions for young children. The Reggio Emilia emergent curriculum offers this alternative view, as it regards a centralised, prescriptive approach as stunting the potential of children by formulating their learning in advance. Reggio Emilia educators advocate an approach in which adults outline flexible, general educational objectives, but do not formulate prespecified goals (Soler & Miller, 2003, p. 66).

And somewhere between these two extremes should be an intermediate approach to curriculum design: Te Whäriki is a kind of "framework consultative approach to curricula" that "provides the main values, orientations and goals for the curriculum but does not define how these goals should be achieved. Interpretation and implementation is left to local decisions" (Soler & Miller, 2003, p. 66). So, the typical example of an open pedagogy is the Reggio Emilia emergent curriculum. Another important example could be the Paulo Freire's method of adult literacy. It is not only based on words used by the adult students—something not new, although rare at his time—but also based on a broader notion of literacy. Teaching must allow people to read the world around them, to know themselves and their position in the society; what should be more transformative in the context of excluded and oppressed people (Freire, 1987).

Another group of examples were identified by Terry Wrigley (2005) in an inspiring article which is the first mention of open architecture that we found in the educational literature. Wrigley refers to pedagogical methods that would better engage students based on: the interrelationship between experience and symbolic representations; engagement in activity in a learning community—a "community of practice"; a sense of empowerment by restoring voice and agency; and simulations are better than discussions or debates for various reasons (Wrigley, 2005, p. 311). Wrigley argues that this kind of pedagogy involves "a shift of focus from the single lesson to larger units of time," creation of spaces for voices and agency and even real audience or outcomes. Some examples should be helpful to make this idea clearer. Wrigley calls this kind of pedagogy "open architectures for learning," which give scope for independence in a learning community:

> 1) Project Method, as developed by Kirkpatrick and Dewey... begins with a theme or issue introduced by teacher or pupils... The next stage is independent research or inquiry, with each group or individual choosing to investigate a particular aspect. In the final plenary stage, each group presents to the class and stimulates further debate. Where possible, there is a fifth stage, involving a real-world outcome . . .
>
> 2) Problem-Based Learning... It begins with a situation, description or scenario which is difficult to "diagnose". The next step is for students to begin to articulate the possible problems. It then continues as Project Method . . .
>
> 3) Storyline is a form of thematic work structured by a narrative. This can be based on a novel, but more often the bare outline of a story forms the skeleton . . . It typically begins with a situation... The learners invent characters for themselves . . . The teacher . . . moves the story forward by announcing an event (Wrigley, 2005, p. 313).

Open Educational Resources

There are several free software applications and repositories based on open architecture premises which could be useful to manage curriculum resources in a flexible and reliable way. The Open Educational Resources (OER) are probably the first step, already in train in the open architecture curriculum movement. Some OER allow users to create their own content using digital platforms of collaborative work. One possible step ahead could be the legitimization of one or more OER as official resources for teachers of some city, state or country. In this case, special care must be taken on quality assurance, since everyone can contribute.

But even when the OER content is excellent, its categorization and integration rarely goes beyond some keywords. It is useful but could be more so. In order to improve the possibilities and efficiency of this categorization and integration of curriculum resources, certain digital technologies are promising. The ontologies, for example, are structured dictionaries with standard language and permanent links. This kind of dictionary not only describes the meaning of the words but also articulates words with other words and digital resources. They can work based on a simple triple pattern[5] that creates a structured data. This should be very useful in an open architecture curriculum. For example, one unique OER could be accessed with different perspectives, each one from a "real world" standard. So, the same educational resources bank could be accessed by someone interested in global principles, another person looking for national curriculum, or even a group of teachers trying to integrate their courses with their own ontology.

In this sense, we can build pluralist architectures that allow multiple views and uses of the same resource, each one with its own dynamics of interaction and knowledge accumulation. We already have open technologies to do this. We can build ontologies associated to structured semantic data, integrated to a collaborative OER and a course management system. All these "modules" already exist in free software. Each ontology would be a perspective, a way to interpret the educational resources and to integrate them. This should make the use of the OER more efficient, flexible, and easy for teachers. After all, the main intention is to improve the teaching-learning process. Given time, collective dynamics can emerge, creating a democratic environment of continuous professional improvement in education, which is our goal in this little exercise of imagination.

Public curriculum and free software

Before detailing the third example (the open architecture national curriculum), it is worth explaining more clearly the analogy between public curriculum and free software, mediated by the concept of open architecture. When transposing concepts, it is important to be careful and avoid misunderstandings potentially generated by the changing field. In this case, we are going from the informatics to the education, so a many things are different. For example, when a software is not functioning as expected, it is not difficult to detect the malfunction and its source, even if one does not have access to the source

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[5] The triple is the basic unit of the data model called Resource Description Framework (RDF), consisting of 3 parts: subject/predicate/object. Or in general: first element/relation/second element. This basic structure is very powerful, flexible and robust, and could be a solid basis for an open architecture curriculum.

code. Since the software output is well defined, one can verify the functioning with a number of good indicators. In education, however, it is not so simple. How could we know whether there is a "bug" in the school or in a course? When can we be sure things are going according to plan? Do we have a plan? It is not enough (or even useful to teaching) to apply some large-scale standardized tests to check whether a school system is running well. Taking into account this and other limitations of the analogy between curriculum and free software, we can now focus on its potentialities. First, some interesting similarities:

a)   most of curriculum and free software can be converted to digital objects, so they can be produced, modified and distributed at very low cost;

b)   both need some explicit general standards, related to a group of concepts, an ontology;

c)   both seem to work better (at least to the user) in customizable forms;

d)   both can be understood in different levels of complexity;

e)   assuming Giroux's view of teachers as transformative intellectuals, both curriculum and free software would be continually created by a community of users; and

f)   assuming Mouffe's view of democracy in which pluralism means it is not always possible to have a consensus without exclusion, both public curriculum and free software would be based on conceptual structures that allows not only compatibility and unity, but also local singularities.

Furthermore, the local singularities are not seen as material imperfections of ideal concepts but are constitutive parts of the theoretical model of an open architecture curriculum. In this sense, local heterogeneity can be better understood as a source for legitimacy and creativity. The structure of free software could be a source of inspiration about how to work together in conceptual/virtual objects. It is a structure that enables a community to: produce collectively and individually; learn and improve collectively and individually; ensure transparency and ownership; make available publicly; and use, modify, or create products that are free, diversified, and compatible. This kind of practice and production, to be effective in society, must exist in several dimensions of human life: in the culture and the minds, in professional activities, in the law, in software platforms, formative courses, textbooks, and so on.

OPEN ARCHITECTURE NATIONAL CURRICULUM

What if countries like the US and Brazil try another approach to curriculum rather than defining in detail a "minimal universal content" that is supposed to guarantee educational rights/needs, and to be evaluated in standardized assessments? This approach might help in the management of the school system but is not much useful to teaching. A different approach is to design the national curriculum not for external psychometric accountability but to improve the teaching and learning process inside and outside the school.

A national (or state) open architecture curriculum should be a framework that allows heterogeneity of pedagogical methods, continuous local creativity, the emergence of general patterns while guaranteeing a level of comparability and management as well as being a useful tool for teaching planning. But its main goal should not be to facilitate management but to allow dynamic and self-organized processes to be managed to some

extent. It must be complex enough to contemplate the diversity of society but simple enough that it can be globally comprehended.

It is, therefore, intelligibility—and not management or assessment—the primary criterion for pursuing simplicity in the curriculum. After all, the recent development of informatics can help us to get rid of the constraints that rationalization has imposed on teacher work. Today, it is possible to rationalize human diversity without needing such hierarchy and homogenization, without replacing communicative reason with instrumental reason in (especially local) management. Computer science and free software have much to contribute in this direction but the challenge is much broader and goes beyond technology.

The communities of collective and transparent work—such as scientific or free software communities—should be the main foundation of the curriculum. Communities of teachers, with a creative minority, should be able to select or create didactic materials and develop plans according to open architecture standards. Perhaps these standards have already been created, perhaps they will be created by the community itself. There must be specific policies to consolidate these communities, guaranteeing virtual sharing environments and also periodic real meetings. These communities would be places of continuous formation of shared innovation and of cultural and technical enrichment. As a great part of curriculum is immaterial, it seems to be a fertile field to the open architecture professional communities.

What would be the overall structure of an open architecture curriculum? The central aspect should be the pedagogical objective, without which there is no intentionality and, therefore, there is no teaching-learning activity. The proposed objectives for each class, course or project are the pillar of the educational process, from which will be defined the strategies, didactic resources, and forms of evaluation. So, every element to be incorporated in the curricular architecture should have at least one explicit objective that, after being read, makes sense to teachers and students. This principle could connect all parts of the architecture in a transparent and useful way.

Such objectives would be associated with content, skills, etc., composing a kind of dynamic semantic network, with the purpose of facilitating and improving the teaching work. This semantic network could produce outputs in "traditional curriculum format," useful to teachers, students, parents. Actually, depending on the complexity of the architecture, several different outputs could be generated from the same semantic network.

Several teachers from the same school could use open architecture to integrate their courses. A school could release the integrated set of courses in detail, including all necessary educational resources, as a Linux distribution in open source. It has great potential for overcoming educational inequalities and segregation. Different schools could generate curricula that can be used in other contexts, customized or not. Cooperation between teachers and schools should improve education as a common good, in these days when everything is an asset in the competition, generating closed and inefficient architectures. Some isolated creations could be integrated to the system in order to help and inspire others. The different curriculum conceptions and practices could be combined with common language, formats, and methods.

Schools that value student voice could provide greater visibility and recognition of their curricular practices, having to find ways to systematize their work in a way that is compatible with open architecture standards. Schools that give less value to student choices will be able to map content, skills, and materials more frequently in certain contexts (e.g., schools in a region) and use this information to define their curriculum.

An open architecture curriculum could allow a kind of flexibility that does not simply mean a menu (partly mandatory, partly optional) determined by "experts" to manage teacher and student activity. This other kind of flexibility is generated primarily by local creations, selections, and adaptations made by the users themselves (in this case, mostly the teachers). More than a "previously fixed flexibility," we seek for a kind of plurality as described by Mouffe. With more voice and agency, also inside a well-designed conceptual architecture, can teachers and students make the time in school most useful to learning. The goal is for diversity to be seen as a fundamental component of continuous innovation and collective construction of knowledge in education.

Like free software developers and users, teachers would organize themselves into production and learning communities, brought together by open infrastructures and common rules. Schools would publish details of their curriculum, such as open source Linux distributions. School systems would no longer express the desire of some to emancipate others (universally and obligatorily), but rather a meeting between different subjects seeking together the meaning of emancipation. Acting in the same structure, learning, producing, and accumulating together, keeping singularities and diversity.

But what could be the concrete form of this curriculum? A book? A digital platform with free access? An ontology created by a community of teachers and related to OER? Some institutions, supports and meetings to stimulate teacher communities? An ethical, legal and economic environment? An inventory of pedagogic methods related to specific objectives? A simple description of several ways to listen student voice? A group of indicators used to map different forms of learning, rather than comparing all in a unique scale? A large and simple vocabulary to facilitate communication and collective production in education? An emergent large scale curriculum whose core changes from time to time? A collective construction of some society, multidimensional and dynamic?

Maybe all of these.

THE IMPORTANCE OF TEACHER INTELLECTUAL ACTIVITY

Is it worthwhile investing efforts in this way of conceiving and practicing the educational activity? Are there many teachers willing to work in community? Would it not be more effective to centrally promote a curriculum reform than to tries to lay the foundations for a dynamic and complex curriculum that would be in constant reform?

Several studies—for example in Larry Cuban (1990)—demonstrate how curriculum reforms rarely have profound effects on the school system, either because of the resilience of the institutional norms or the professionals involved. In other words, what is planned on the "top" rarely affects the "bottom" as expected. On the other hand, several studies have shown that the quality of teachers depends on the career conditions associated with a certain autonomy, for example, see Martínez-Garrido and Murillo (2016), Fernández Batanero (2013) and Travitzki (2017). That is, a good teacher should be minimally creative and have a personal style of proceeding, as in other highly

specialized professions, such as medicine and law. Teachers cannot be just passive appliers of a general fixed curriculum. This important dimension of teaching is not easy to manage, but in an open architecture it can be recognized and improved. In fact, without a creative community, the open architecture has little use.

Educational activity is creative, despite all constraints. Many innovations are made every day by teachers, but most of them are made in closed architectures or "without architecture". For example, a closed architecture can be a state-of-the-art educational electronic platform with resources to study and assessment tools, but available only by payment, or only in an "instrumental perspective" (that is, with restricted view of goals and resources, without access to all information, in order to better achieve some goals externally defined). On the other hand, innovations "without architecture" can be those made daily by teachers who have the resources, time, and willingness to improve their work autonomously and critically, taking into account students' interests, the school project, legal frameworks, as well as their own talents. All these somewhat wasted creative potentials can be harnessed in an open architecture.

The closed architecture in the textbook is not restricted to price or copyright issues. There is an additional problem regarding the publishing market, which needs to create new products. Often, in new editions of textbooks, there are more changes in the form than in the content, when it should be just the opposite if the goal of a new edition is to make life easier for the teacher, including those who already work with it. For example, the number of some questions (usually at the end of each chapter) can change, forcing the teacher to check all questions he likes to use in each new edition. Sometimes, the question or some information in the text is taken away from the new editions although still relevant and up-to-date. These kinds of changes without real substance can create unnecessary hardship for teachers. It should not occur in an open architecture system such as free software.

The open architecture system can also help to develop scientific knowledge concerning education, structuring teachers experiences in collective frameworks (with common names and ontologies, at least). The goal here is not to seek a unified theory of pedagogy, but to help teachers with teaching while keeping their experiences in a dynamic memory that accumulates practical and theoretical knowledge. According to Anísio Teixeira (1977), it is important to:

> [P]rovide scientific conditions to the educational activity, in its three fundamental aspects—selection of material for the curriculum, methods of teaching and discipline, and organisation and administration of schools. In other words, it is a matter of bringing education into the field of the great scientific arts—such as engineering and medicine (p. 46).

Finally, the open architecture system can contribute to some significant issues relevant to contemporary education in democratic countries. Firstly, the distribution of students by ages. This school organization inspired by an "assembly line," with reproof mechanisms, becomes an obstacle to the progression of students, to the recognition of their potentialities and to their socialization. By projecting cultural homogeneity and creating an illusion that there is a standard of excellence to be achieved at every stage of school life, age-grouping favours practices of school discrimination, exclusion, and violence. A second issue in the contemporary education is whether—or to what extent, or when—students can make curricular choices and carry out their own projects. We

will discuss this later. And a third issue is the impact of socio-economic context on learning. Tolstoi (1988), Illich (1973), Freire (1987), Bourdieu and Passeron (1992) are among the numerous authors who investigated this impossibility of the system to distribute emancipation, starting with the assumption that certain knowledge—and specific ways of dealing with such knowledge—could be universally valid regardless of social group, class or culture. These are complex issues, there are several technical, cultural, and political components in each one, and clearly the open architecture system cannot do anything by itself. However, it can help if aligned with public policies and cultural movements.

FINAL CONSIDERATIONS

Public school systems are at the centre of the debate and struggle for democracy in contemporary terms. Standardized assessments have increasing influence in determining what should happen in the classroom. There is no place in a state or a national educational system, it seems, for a locally negotiated curriculum. Maybe, due to political and philosophical issues, maybe also due to a lack of technology and long-term viable initiatives. However, education is about influencing human beings, hence the principles that drives education (laws and curriculum) also defines what is a (good) human being. And it is not a consensus, nor a technical issue but a human, philosophical, and political problem—at least if one is aligned with a plural democracy. In this context, how can one recognize a unique "legitimate knowledge" if there is no universal subjectivity? Especially after discovering, since Bourdieu, that the criteria for legitimizing school knowledge contributes to educational and social inequalities between classes, genders, ethnicities. On the other hand, how can we manage groups of students and teachers doing different things?

The ideas we try to gather in this essay are well known in the educational field and maybe they just sound good sometimes, or contradictory. In fact, we present no detailed or concrete case for an open architecture curriculum. Our main goal in this paper is bring to light some concepts and experiences that can work as examples and inspiration of this simple idea: to rethink public school curriculum issues driven by the concept of open architecture.

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Examining digital disruption as problem and purpose in Australian education policy

Shane B Duggan
RMIT University, Australia: *shane.duggan@rmit.edu.au*

Young people's relationship to the digital economy is a key site of popular and policy attention within the context of shifts in labour market conditions globally. The massification of digital media and rapid growth of digital markets globally have brought significant challenges for policy makers in what counts as work and how best to prepare young people to engage with it. This has manifest in a proliferation of initiatives and policy orientations across much of the global North which have tended to focus on the importance of science, technology, engineering, and mathematics occupations, and, in particular, computing aimed at preparing young people for jobs of the future. The formalization of learn to code programs in school curriculum has been one such initiative. Despite the proliferation of coding and computational thinking curriculum across many countries, there remains a relative paucity of scholarship examining their embedding in educational policy debates. This article follows the announcement of the 'coding in schools' policy in Australia since its formal announcement by Opposition Leader Bill Shorten in his Budget Reply speech in May 2015. The announcement followed similar moves in other countries and has cemented 'coding in schools' as a literacy of 'the future' in the Australian political landscape. This article suggests that, while a policy focus on technical and instrumental skills such as computer coding may help young people to interact with dominant technologies of the present, they also risk weakening a more substantive conversation around educational participation and purpose in the present, and for the future.

Keywords: coding; digital transformation; education policy; Hansard; STEM

INTRODUCTION

Despite the rapid rise of coding and computer programming in school syllabuses across the global north, there exists a relative paucity of scholarship examining their positioning in educational policy debate. The dispersed nature of these programs, both in their take-up and embedding in school-based curriculum, means that, beyond the reported statistics of each initiative, it is difficult to glean an accurate indication of how many programs exist, their constitution, and their embeddedness in formal school curriculum. A cursory search of the website of the market-leading provider, code.org, states that over 20% of US school students use the platform, and 10% "of the world's students have tried the Hour of Code", their proprietary program (code.org, 2017). In Australia, codeclubau.org boasts over 65,000 student accounts across hundreds of school sites. While these numbers currently represent a modest slice of the 1.4 million primary school students in Australia, they reflect a growing concern for coding as a

core competency young people should be encouraged to develop. As I argue below, this is symptomatic of the broader orientation in response to the rise of computer-mediated interactions in the labour market and represents a technical solution to an instrumental set of logics around networked technologies.

This paper examines official Hansard debates by Australian Federal Ministers that followed the announcement of the "coding in schools" policy in Australia from its formal announcement by Opposition Leader Bill Shorten in his Budget Reply speech in May 2015 up to the time of the federal election in July of 2016. The announcement came after similar moves in other countries and cemented "coding in schools" as a literacy of the future in the Australian political landscape. This article provides a critical analysis of parliamentary debates, media releases, and engagements by government and opposition federal ministers to consider how the re/articulation and embedding of Science, Technology, Engineering, and Maths (STEM) education takes up an idealized notion of 'the future' as tech-enabled and in need of policy response to 'the new.'

The analysis highlights three lines of debate that have emerged in operationalizing and responding to educational policy in the wake of the digital labour market disruption: first, the rise and reach of networked infrastructures into traditional modes of life and work; second, the future value of existing and proposed programs of study; and, third, the implications for resourcing in the wake of the Global Financial Crisis and uneven economic recovery. Despite concentrating on the Australian context, the issues raised in this paper around coding in schools resonate with conversations around the technologization of work and life on a global scale. Combined, this paper argues that, while policy focuses on technical and instrumental skills, such as computer coding, may help young people to interact with dominant technologies of the present, they also risk weakening a more substantive conversation around educational participation and purpose in the present and for the future.

THE RISE OF CODING IN SCHOOLS

The term 'coding' in relation to schools is often used as a catch-all for a range of activities and pedagogies within visual programming environments that employ a simplified programming language (Corneliussen & Prøitz, 2016). Many of the current iterations use a project-based approach that draws, at least in part, from the work of MIT Media Lab pioneer Seymour Papert and his use of turtles along with the LOGO interface beginning in the late 1960s (Papert, 1972). As Corneliussen and Prøitz (2016) describe in their recent work, in practical terms, this work often involves children engaging with "boxes that represent parts of the code while editing other parts of the code themselves to produce a game or a story told with moving objects on the screen." These projects are often shareable or playable, giving the students an opportunity to run the program that they have created. There are an ever-increasing number of programs, projects, and offline forms that this instruction can take, such as through proprietary products such as *Scratch*, *LEGO Mindstorm*, and *Tynker*, which leverage the *Minecraft* platform (see, e.g., Sáez-López, Román-González, & Vázquez-Cano, 2016). What is common to each is a focus on combining aspects of gaming with the fundamental building blocks of constructing executable programs in a visual, assisted coding environment. In this sense, current discussions around coding have emerged within a longer conversation around computational science in schools that has three key elements, which I consider here in turn: the development of curriculum;

pedagogical instruction; and organizational policies around data capture, management, and reporting.

Computing curriculum has a longer history in schools, and there have been significant calls for its embedding across the curriculum in Australia for well over two decades—as is the case in many other countries. Specific calls around 'learning to code' are more recent, with a particular surge in interest over the last decade. Williamson (2016, p. 39) notes that "the idea of 'learning to code' . . . has grown from a minority concern among computing educators, grassroots computing organizations, and computer scientists into a major curriculum reform." Within this, significant corporate interests have invigorated debate both within and beyond the schoolyard context, with calls to embed the computational capacities and the skills of 'digital citizenship' within educational frameworks worldwide.

The coding landscape is uneven, with multiple resources often operating within and across national borders as well as within state and local jurisdictions. In a comprehensive review of computing curriculum globally, Falkner and Vivian (2015) show "coding" as emerging as a key part of policy discussions and formalized part of the curriculum at a national, regional, or local level, especially in Europe and North America. Their analysis shows that the resources deployed across these jurisdictions differs greatly, with some systems mandating the use of specific proprietary programs but the majority making use of those supporting "free and open usage," and providing less explicit guidance around "on the ground" implementation (Falkner & Vivian, 2015). What is common across their analysis, however, is an increasing expectation in many countries that children interact with digital and networked technologies as part of their formal education from a very early age.

Despite the enthusiasm for integrating computer science curriculum in schools, there remains an ongoing debate about the teaching of programmatic thinking within the classroom environment. Proponents of programmatic thinking have espoused its relative merits as a cognitive process for well over four decades, and many highlight the dramatic rise of computer science in all facets of modern life as a key indicator of the need to ensure students understand coding as the building blocks of computer science (Robins, 2015). Sáez-López et al. (2016) note that the growing interest in learning to code "driven and disseminated by organizations such as 'codecademy.com' and 'code.org' [is posited] not only for future job opportunities and growing demands in this field, but for the educational advantages and benefits that coding in education provides" (p. 130). Accepting this proposition, there nevertheless remain significant challenges around what constitutes computer science in the classroom, how it should be deployed, and to what end. Vivian, Falkner, and Falkner (2014) highlight the lack of learning and teaching research in computer science education research, particularly around teacher preparation, effective pedagogy, and resources development. For many, providing opportunities for young people to engage in computational thinking both "plants a seed" for potential future recruitment into computing (Corneliussen & Prøitz, 2016) and provides a necessary foundation for interacting productively with the tech-enabled labour market of the future (Schmidt, Resnick, & Ito, 2016).

Reviews of the current landscape acknowledge that research into computer science in a K-12 context is a "relatively young field" (Vivian et al., 2014, p. 392). Vivian, et al. (2014) suggest that, to date, practical considerations around teacher preparation, curriculum design, and the use of specific programs have dominated the field of

inquiry. In their view, policy analysis, though scant in the Australian context, has tended to interrogate the challenges that national and local governments face in preparing teachers and young people to participate in computer science in schools. This finding reflects the global trend. For example, in a review of current research into learning and teaching programming, Robins et al. (2016) suggest that coding related activities are "usually addressed from a psychological/educational perspective" with research focused on "program comprehension and generation, mental models, and the knowledge and skills required to program" (pp. 138–9), rather than how these programs interface with, and operate at a policy level.

In Europe, there has been a recent surge of interest in what is termed "informal" computer science curriculum (DiSalvo, Reid, & Khanipour Roshan, 2014), and a report on school-based coding initiatives across Europe identified curriculum initiatives across 16 countries (Balanskat & Engelhardt, 2015). While these examples differ in terms of their focus on upper secondary and tertiary curriculum, what is common to both is a recognition of the unevenness of the field in terms of resources, approach, and support content, and the relative paucity of policy research in computer science education. With the formalization of many of these programs into a political imaginary predicated on their value for young people's engagement with the future, there is a pressing need for their examination.

EDUCATION POLICY AND THE FUTURE AS OPPORTUNITY AND THREAT

A dominant presumption of recent education policy reform on a global scale has been to shape young people's growth and development in such a way that they can participate in the economy of the future. In their recent comparative review of global efforts in digital innovation in education, the OECD (2016) suggests that "education can prepare young people for work in the sectors where new jobs are expected to be created in the coming years" (p. 67). Implicit throughout this report is an overriding market-logic of embedding digital technologies as fundamental to innovation in the present and towards the future.

In many post-industrial nations, innovation-focused reforms are often framed as a response to the broader embedding of networked technologies in many parts of the economy at a global scale. In this characterization, the market becomes the litmus test against which decisions are made, and, as Adams (2016) argues, "the values and ethos of business provide an ethical base for operationalising education and for defining how success might be judged" (p. 291). Here, for the OECD and others, tensions emerge from navigating the link between local conditions and larger patterns in economic and policy structures, and how those relationships play out between public and private sector entities. As is noted in recent policy scholarship (Ball, 2016; Lingard & Keddie, 2013; Scholz, 2013;), the marked increase by corporations in the production and circulation of market-oriented policy has had a profound impact on the shape of schooling systems at a district, state, and national level. As Lingard and Keddie (2013) show, these interests increasingly operate through networks that, in a significant way, construct, promote, legitimize, and then sell solutions to real and imagined 'crises' of educational provision and practice.

At a policy level, coding in schools has been tied to two emerging lines of debate in recent times that are useful for this analysis. The first extends discussions around teacher preparation and resourcing towards what Williamson (2016) suggests is an emphasis on digital governance or, what he terms, "political computational thinking' (p. 40). The second emerges from an increasing economic concern from governments globally around the proper preparation of young people within the context of digital disruption, the rise of networked technologies, and fostering innovation in the future.

To elaborate both: Williamson (2016) cites the shift in English curriculum policy from ICT to computational thinking as indicative of a pivot towards algorithmic thinking and data analytics across a broad range of education disciplines which mirrors the "disparate social, political, cultural, and economic contexts, across governmental, civil society, and industrial sectors, and in scientific, social science, and humanities disciplines" (p. 40). These concerns are not limited to education policy. As Srnicek (2017) suggests, the broader ways in which forms of labour have undergone a material, as well as symbolic shift that mark the continued expansion of the networked economy are key sites of anxiety for policymakers and, as this article shows, animate policy conversations around life, learning, and labour.

The instrumentalization of current practices in educational thought overwhelmingly tend to be presented in terms of rational thought, and the technologization and quantification of an increasing body of social and cultural practices. Gulson and Webb (2017) consider this as the embedding of a "computational rationality". In their view, "systems of thought . . . [can usefully] . . . be understood as intensifying an instrumental set of logics in educational governance and decision making" (p. 16). They continue, "the development, design, implementation and evaluation of policy solutions (i.e. the 'policy cycle') . . . [involves the sequencing of] social policy as a logic", reflected either as "forward mapping" in terms of predicating a particular outcome, or "backward mapping" in defining, in advance, a set of desired behaviours in order to develop a set of objectives (p. 17). Both are at play in the push towards coding in schools; the former for defining success in terms of future engagement with the digital economy and the latter for orienting schools, teachers, parents, and young people towards digital technologies as a sort of rational behaviour. Gulson and Webb are critical of this orientation, noting how "these rationalities are situated according to the dominant representation of the problematic situation and rarely analyse how problematic situations have come to be represented" (p. 18). Similarly, for Selwyn (2016), the "digital improvement/transformation/ disruption of education clearly require[s] problematising" (p. 18) in its articulation through forms of policy governance, and in its implementation in and around schools. I expand on both of these lines of debate in the latter part of this article. Alongside this, I take Williamson's (2016, p. 55) suggestion that coding in schools is implicated as a form of digital governance in which it comes to stand-in for particular forms of solution-making.

RECURRING PROMISE(S) OF THE NEW

Notions of futurity and the 'new' within the digital information economy have played a prominent role in popular and policy discourse in Australia. While these calls have a much longer history, as McLeod and Wright (2012) note in their exploration of 'the promise of the new' at key historical moments in Australian policy in the early 20th Century, there has been a long-standing tendency towards 'innovation' and 'new

industries' as a point of departure from the present and for aspiration towards the future. However, as Doherty (2017) argues, optimism for young people's place within the 'future' illustrates only half of the picture, with national policy frameworks such as the *National Partnership Agreement on Youth Attainment and Transitions* (COAG, 2009) reflecting a deep anxiety around perceived precarity of young people's work and life opportunities. What is brought together in this complex policy network is, for Doherty, a conflation of youth and educational policy around increased participation in secondary and tertiary education, individualization of responsibility onto young people rather than the state, and anxiety around the ongoing effects of labour market changes that have accelerated alongside the rise of networked technologies.

As McLeod and Wright (2012) remind us, "[t]he call of the 'new' underpins much educational reform discourse, from utopian strands and grand gestures to the more formulaic rhetoric found in declarations of new policies for new times" (p. 283). McLeod and Wright's analytic invites examination of the adjective 'new' in relation to what it is affixed, used to justify, and enable. Brought into a close reading of the pervasiveness of utopianism in educational scholarship and practice, McLeod and Wright's (2012) analysis points to the "complexity of educational change and works against simplified views that are either overly optimistic or pessimistic" (p. 286). It is the relationship between these 'grand gestures' and declarative policy directives which underpins my reading of "coding in schools" in this article.

Anxieties around the 'new' are embedded in discussions about young people's lives in terms of policymaking around specific initiatives like coding—as is the concern of this article—as well as in broader conversations in popular discourse. A full consideration of the composition of various calls to the new is beyond the scope of this article, however two observations are pertinent here. First, as Amsler and Facer (2017) argue, education policymaking is "often dedicated to the formation of future persons, the realization of social futures, and the advancing of historical projects." The effect is that policy instruments often imagine an idealized kind of future subject and seek to anticipate the challenges and opportunities they will find there. Policy 'futures' have both predictive and constitutive elements.

Second, policies, and perhaps especially those concerning digital transformations, are made up of multiple histories converging on a problem of the present, which is then mapped forward as a kind of genesis from which the future progresses. I have considered this at length elsewhere with regard to senior secondary and Higher Education policy (Duggan, 2018), as well as in aspirations and young people's orientations to the future (Duggan, 2013, 2017). Here, Barbara Adam's (2010) distinction between future presents and present futures is useful; the former guiding anticipation for change and the latter taking up the everyday tasks of prediction and enactment. Adam (2010) argues: "[c]ontemporary daily life is conducted in the temporal domain of open pasts and futures . . . [which are] . . . projectively oriented towards the 'not yet'" (p. 47). Future orientation is a necessary precondition for participation in many aspects of social, cultural, and civic life, with both our anticipations and anxieties, as well as our predictions and yearning for certainty, making up, in a large manner, our ability to meaningfully plan and act in the everyday. Coding, and calls to the primacy of human-computer interface sits well within that call. In this, individual social mobility is given primacy, bound up in making the future through technological interventions and in engaging with digital tools and practices in

the present. Active engagement with the technical aspects of networked technologies are increasingly synonymous with calls to continual self-improvement and critical self-reflection with identifying opportunities to be entrepreneurial and innovative in 'making' the future.

MAPPING CALLS FOR CODING IN SCHOOLS

This analysis reflects on part of a larger study into young people's engagement with digital disruption and the future of work. The study is concerned with two primary questions: first, how is digital disruption framed within dominant popular and policy discussions surrounding young people; and, second, what are the ways in which these framings depict or imagine the future that young people are expected to inhabit? These questions draw together nothing of aspirations, identity, and temporality. In designing this research, I am informed by the body of scholarship seeking to understand young people's lives, and their interaction with hard and soft forms of policy, particularly in relation to formal education. This work is necessarily broad in its definition of 'youth,' and, within this, there is a need to consider how educational policy making concerning the rise of networked technologies implicates the whole educational apparatus, as the analysis below illustrates.

There is a growing body of research that deploys network analysis techniques for tracking the reach, depth, and spread of formal and informal educational policymaking (Au, 2008; Ball, 2016; Hogan, Sellar, & Lingard, 2015). There exists significant "slippage", as Ball and Junemann (2012, p. 4) note, in the use of the term "network" in this field, and, indeed, notions of networked governance have long traditions within and beyond educational scholarship with relation to policy (Lingard & Sellar, 2013), cultural theory (Boyd, 2007), and economics (Benkler, 2006; Biddle, 2013). Ball and Junemann (2012) deploy the notion of the network as "method," in their terms: "a means for tracing and representing social relations within the field of policy, and as an analytic tool" (p. 4).

This article draws on an analysis of 486 records collected from the Parliament of Australia Hansard record of House and Senate debates and Standing Committees, as well as official media releases by Australian Federal Members of Parliament from https://media.australia.gov.au/ between October 2014 and 2 July 2016; from the month preceding US President Barack Obama's video to launch the 2014 "Hour of Code," until the date of the most recent Australian federal election. President Obama's speech was chosen as a start point for this examination because of its popularity (over 200,000 views), and its representation as a major endorsement of coding in schools by a government with which Australia has strong ties. The 2016 election was chosen as an end point because it represents a moment where coding in schools had achieved bipartisan support, with both major parties committing to federal policy.

Records were located using the key words 'coding,' 'computer science,' as well as 'coding in schools', and 'computer science in schools'. Initially over 3,000 records were located; however, of these, around 1,100 were found to be duplicates and a further 1,400 were false-positives. Thus, the search parameters were revised with 'in schools' which resulted in greater accuracy. An initial word level analysis using INvivo found over 1,000 distinct usages of the term 'coding', yet deeper examination revealed three categories that guide the discussion below:

1. The establishment of specific coding in schools initiatives, including but not limited to Federal Opposition Leader Bill Shorten's (2015) plan to introduce "the language of computers and technology. . . taught in every primary and every secondary school in Australia."
2. Explicit links between the introduction of coding in schools and 'jobs of the future'.
3. Linking coding to discussions about innovation and actual or desired growth in the high-tech industries.

Following Gerrard, Savage, & O'Connor (2017), this article conceptualizes "policy and media as discourses in and of the public sphere" (p. 506). It is for this reason that official media releases are included alongside parliamentary records, and an extension of this study will be to supplement the current archive with a broader search with the same parameters of major print and broadcast media channels. The goal of this extended project will be to examine, as Gerrard, et al. suggest, "the inter-relationship between media and policy in the construction of meanings and practices in education" (p. 506).

Central to this analysis is the assumption that policies do not emerge as complete or neat, nor that they are ever wholly new or different, but rather they reflect both formal and informal groupings, underlying logics, and communities of practice (Au & Ferrare, 2015). It is within this definition that I proceed below. I suggest that, rather than any given announcement indicating either the beginning or end of policy, public statements from elected officials form one conduit, among many, along which discourses around networked technologies are taken up, travel, and sediment. Drawing on Ball (2016, p. 4), and with the two guiding questions above in mind, the remainder of this article is concerned with the promotion of coding in schools, asking: In what ways do the terminologies, value propositions, and tensions around coding in schools circulate in Australian federal policy discourse within the context of the rise of coding programs globally? Here, I focus on a relatively small number of examples that illustrate, I argue, the emergence of coding in schools as a policy imperative at a national level, its reinforcement and joining up with the (global) marketplace, and its sedimentation as a common sense in the following election cycle.

THE LANGUAGE OF COMPUTERS AND TECHNOLOGY: INTRODUCING CODING IN SCHOOLS

In late February of 2013, brothers Hadi and Ali Partovi collaborated on a short video titled: *What most schools don't teach*, promoting computer science and decrying its relative lack of support in US Schools (Code.org, 2013). The video, featuring tech elites, including Bill Gates, Mark Zuckerberg, and Jack Dorsey, went immediately viral, becoming the top YouTube video in one day and, at the time of writing this article, has over 14 million views, and has been translated into multiple languages. By the end of 2013, Code.org had established the *Hour of Code* with the express support of then US President Barack Obama, reaching over 20 million students globally in 30 languages. Today, code.org reports that number to be 500 million students trying the *Hour of Code*, with 750,000 teachers and 25 million students extending beyond this to their full computer science course. Beyond their celebrity endorsements, one of the strengths of Code.org's approach is in simultaneously providing classroom-ready digital materials, as well as training, curriculum, and advocacy. Indeed, within the

Australian context, Code.org's proponents included parents and after-school program leaders as much as classroom teachers, which greatly assisted with its rapid growth.

As Falkner and Vivian's (2015) analysis shows, curriculum in the Australian context at this time focused on incorporating digital technologies as a cross-curricular capability, with an emphasis on computational thinking, data, and digital systems. While this certainly included coding, the implementation of the digital technologies curriculum was uneven, and relied heavily on existing teacher knowledge and interest. While there was some support for the *Hour of Code*, and other extracurricular computer science activities, there existed very little formal recognition by policy makers. Indeed, the Hansard and official media records to the end of 2014 indicate no explicit mention of 'coding' programs in schools, though there is some mention of the importance of STEM to the 'jobs of the future', a connection I return to in the following sections.

On Thursday, 14 May 2015, Australian Federal Opposition Leader, Bill Shorten rose for his *Budget Reply* speech, launching a wide-ranging plan for supporting the 'jobs of the future.' In a lengthy section on education, he suggested:

> Madam Speaker,
>
> Productivity is the most important catalyst for our economy.
>
> And the most important catalyst for productivity is education.
>
> Resource booms come and as we discover, they go—but our future depends on investing in our best natural resource: the creativity and skills of the Australian people.
>
> Digital technologies, computer science and coding—the language of computers and technology—should be taught in every primary and ever secondary school in Australia.
>
> And a Shorten Labor government will make this a national priority.
>
> We will work with states, territories and the national curriculum authority to make this happen.
>
> Coding is the literacy of the 21st Century.
>
> And under Labor, every young Australian will have the chance to read, write and work with the global language of the digital age.
>
> All of us who have had our children teach us how to download an app, know how quickly children adapt to new technology.
>
> But I don't just want Australian kids playing with technology, I want them to have the chance to understand it, to create it, and work with it.
>
> We can't do this without great teachers—not now and not and in the future.
>
> (Shorten, 2015)

These aspects of the Opposition Leader's *Budget Reply* speech were generally well received by the public and, as I show below, over the 12 months that followed, both major political parties committed to a national coding in schools policy. There are three moves in this speech that are significant for unpacking the logic of the 'new' that reflect popular anxieties about the future. First, Shorten suggests that "productivity" is a catalytic driver, which follows from the previous section of the speech foregrounding the importance of high-tech and advanced manufacturing in response to global changes. Here, though, productivity is connected to a specific quality: creativity, which is positioned alongside "skills" as the heart of "education" and "our shared future." Second, for Shorten, these skills come together around "the language of computers and

technology" as both an example of creativity and skills in-action and, by proxy, the language of "the future." As Selwyn (2015) notes, this move necessarily positions "Industrial-era" schools as "broken," and, in their place, "various digital technologies are celebrated for kick-starting "twenty-first century learning"" (p. 437). This characterization as to why young people "need" digital technologies often papers over "the complex and compounded inequalities of the digital age" (Selwyn, 2015, p. 437), preferring, instead, broad-brush instrumental solutions to complex, technical problems. Indeed, Shorten's announcement, in many ways, resonates with that of the previous federal government led by his party and their calls to fostering the "education revolution". As Buchanan et al. (2012) note, the education revolution, with its dual focus on significant investment in digital hardware and emphasis on traditional literacies, represented "for the Australian Labor Party the vision of a modern education system that is future proofing Australia's economy through the preparation of workers for the knowledge economy" (p. 103). The call to the provision of "technologically mediated education" is amplified in Shorten's statement, with an accompanying shift from hardware and software to a computational rationality which takes coding as a core (if somewhat conveniently alluring) competency.

The reflexive move towards the end of the above excerpt: "Coding is the literacy of the 21st Century . . . every young Australian will have the chance to read, write and work with the global language of the digital age" elevates "coding" twice over in a way that is significant in the Australian context and is an emerging common sense globally. First, it elevates coding to the status of a "literacy" to be considered along more traditional literacies. This debate has played out globally in scholarly circles since at least the late 1960s (Vee, 2013) but has gained considerable traction among Education Technology companies and coding in schools advocates in the last decade in particular (e.g., Lynch, 2018). However, as Vivian, et al. (2014) suggest, at least in the Australian context, little is known as to the effect this push has had on the reorganization of the curriculum as a whole, especially where those effects are distributed among multiple areas of instruction, as is the case in the Australian Curriculum.

Shorten's announcement is also significant in its positioning of "coding," beyond a literacy, as "the global language." This resonates with recent scholarship which examines the ways in which education policy in recent times operates as an "authoritative allocation of values" (Lingard, 2010, p. 132) that measures, borrows, and learns—on a global scale—against a backdrop of increased commercialization, privatization, and economization (see also, Hogan et al., 2015; Rizvi, 2013). It also calls to what Walsh (2016) describes as a dominant policy discourse that "constructs young people as responsible for aspects of their lives that are shaped by national and global forces beyond their control or influence" (p. 69). Elevating coding in this way responds to calls for its deployment by the various stakeholders described above but also pulls it into the "logics of marketization" that view education at the national level through the prism of international league tables and competition (e.g., Ball, 2004; Ball, Junemann, & Santori, 2017; Lingard & Sellar, 2013). I return to these ideas below.

LAYING THE FOUNDATIONS FOR GREATER SUCCESS: BUILDING THE CASE FOR CODING AS NATIONAL POLICY

In the months following the *Budget Reply* Speech to the House of Representatives, coding in schools made a common appearance in the Hansard and official media

releases, with over 80 distinct appearances in the archive in the second half of 2015. The majority of these were initially from members of the Australian Labor Party (ALP), who were keen to exploit differences in their position from that of the government. ALP Senator Chris Ketter leveraged these distinctions:

> [U]nfortunately, in contrast, the government continues to be stuck in the past. I noted that, in response to Labor's initiatives with respect to coding in schools, this year in question time the Prime Minister [Tony Abbott]—when he says "he" he is referring to the Opposition Leader [Bill Shorten]—said:
>
> *He says that he wants primary school kids to be taught coding so that they can get the jobs of the future. Does he want to send them all out to work at the age of 11? Is that what he wants to do?*
>
> That is an infantile response to a legitimate issue which has been not only raised by Labor but supported by the Chief Scientist.
>
> As our economy responds to technological change, it is vital that all Australians are skilled to be able to participate and secure jobs today and well into the future. Digital proficiency will be a foundation skill as important as reading and numeracy. It will increasingly be the determinant of employment prospects and opportunity. (20 August 2015, 5993)

And second, comparing the Australian policy context to that of international competitors:

> European countries are investigating this issue and over 12 of them already have computer programming and coding as part of their curriculum and a further seven are in the process of introducing it. Countries, including New Zealand and Singapore, are in the process of including coding in the curriculum. Computer programming and coding is already part of the primary curriculum in England, Belgium, Finland, Estonia, the Netherlands, Italy and Greece (20 August 2015, 5994).

The comments, announced at the launch of "National Science Week" not only solidified the federal opposition's commitment to coding in schools as a policy platform, but also sought to crystallize Labor's policy as indicative of global efforts to advance computational thinking in schools. These specific comments garnered little by way of initial response from the government, and through the second half of 2015, there were no direct mentions of a coding in schools policy by the federal Liberal Party. However, with a leadership spill in September 2015, the appointment of a new Prime Minister, Malcolm Turnbull, and mounting pressure across a number of policy areas, the government began to push a narrative focused on "innovation." In a series of doorstop media events late in 2015, the Prime Minister lauded the importance of STEM and. in particular, coding programs in schools:

> [I]t's obviously never been a more exciting time than to be at school here today. The enthusiasm and the imagination of the kids doing their coding, working with computers, demystifying machine languages, it's very exciting. There's $84 million in our innovation package that is going to promote STEM and coding in schools. It's a very important part of our innovation agenda . . . right here, these young boys and girls they are the inventors, the creators, the scientists, the investors, the managers of the industries of the future, the businesses of the future. What they're learning today, the technology skills they're learning, the coding skills, the imagination that is being unleashed, that's being encouraged by those very inspiring teachers, what all that's doing is laying the foundations for greater success and stronger prosperity, more secure and prosperous Australia in the years ahead (Turnbull, 2015).

Early in the new year in parliamentary question time, the Prime Minister reinforced his message:

> [Investment & innovation] is a key platform, a key pillar, of our approach to ensuring that we benefit from this growing global economy as we transition from an economy that was, in large part, led by a mining construction boom which has now toned down. In addition to that, as I said earlier today, we have a $1.1 billion national innovation and science agenda that is driving the jobs and the investment, the commercialization and the research upon which our children's and grandchildren's futures depend. It is supporting STEM in schools. It is supporting teachers teaching computer coding right across the country—the literacy of the 21st Century (22 February 2016, 1605).

Here, the transition from coding in schools as a fringe idea to government policy is clear. Where Shorten's initial announcement was mocked as "sending them all out to work at the age of 11" by his predecessor, the Prime Minister's December comments move beyond a core focus on coding as a "literacy" to that of the "innovation agenda" unlocking "enthusiasm and imagination"—the latter a term he returned to multiple times across the end of 2015 and into the extended election campaign of 2016.

Notably, the language of coding in schools is reinforced in national level discourse in ways that connect it to broader ideas about innovation, the emergence of new networked industries, and shifting demands in the labour market. This operates across the examples above as a computational rationality; one that is underpinned, as I considered above, by both a future present, in which coding has ascended to a dominant literacy through which "we" collectively engage with the world and each other, and a present future where, as Turnbull states: "these young boys and girls, they are the inventors, the creators, the scientists, the investors, the managers of the industries of the future, the businesses of the future."

CODING IN SCHOOLS AS POLICY COMMONSENSE

One year from Bill Shorten's *Budget Reply Speech*, coding in schools as a policy orientation had bipartisan support, with both sides of government agreeing on the need, if not the exact policy configuration, for coding in schools to be implemented nationally in schools. In some ways, as Vivian and Falkner's (2015) earlier analysis shows, preceded by significant support from the education community, global scholarship, and hard-fought battles in designing the Australian Curriculum by educators. Yet, despite these moves, there is significance in tracing the move of coding from a relatively fringe issue, to one of central importance. Specific policies around the embedding of networked technologies in more and more aspects of contemporary life matter less than how and where they emerge, what they are "plugged into," and how they sediment in popular and policy discourse.

It makes sense that governments are attempting to respond to the embedding of networked technologies across work and life, and particularly in relation to young people who bear both the opportunities and risks of the future. However, as I have argued above, an interrogation of the common sense(s) that underpin the network of choices, preferences, and logics that emerge in policy discussions is critical for understanding how they come to operate in particular ways, in particular spaces. What we can see here, then, is an embedding of anxiety for the future(s), and how those capabilities and capacities are technologized through the taking up of technical practices and programs in the present. What is significant is the ways in which the future is imagined in and through these policy orientations as one that will involve more demanding forms of human-computer interface, on the one hand and, most pointedly,

an educational system that prepares successful entrepreneurs to interact with it on the other hand.

At the core of this debate, it is less significant whether or not coding and, indeed, a STEM focus is the driving factor in the future of labour market activity on a national or global scale but, rather, how computational rationalities are deployed across systems in such a way that they serve as truths in place of evidence to support or discredit them. There will be, no doubt, significant STEM and digital focused labour market opportunities in the future, however, there will also be a similar proportion of those positions displaced within the digital economy as "the promise of the new" mobilizes within the next tech environment. This work is incomplete, and many questions remain. Conceptually, there is a need for a broader comparative examination of the proliferation of coding in schools initiatives globally. Here, understanding the interplay between nationally-mandated curriculum programs and their informal counterparts would serve as an important contribution. A network analysis approach is particularly useful here in examining—as Ball, et al. (2017) attempts to do with regard to edu-business—the transnational flows of soft and hard policy, its commodification, and network effects. Methodologically, the use of Hansard records and their reading alongside print and broadcast media remains relatively underutilized in educational policy research. As is well established within education policy research, policy is made from above and below, formally and informally, but is also reinforced through the repetition of significant statements over time. These statements are, in a sense, democracy in-process, rather than in-action. How particular messages circulate in the Houses of Parliament, Subcommittees and "doorstops" serves as an important way that political allies and rivals—as well as the broader public—interact with policy as it emerges and solidifies around particular principles.

Beyond the case of coding in schools, this article has drawn upon a network analysis approach as a means of considering how the promise of the new is animated in educational policy debates within this historical present. Analysing the movement of a proprietary program from the US into Australian political discourse is not accidental here. As I suggested above, drawing on the work of Hogan et al. (2015), there are an increasing number of organizations engaged in actively coordinated efforts to influence government policy in ways that are favourable to their vision. This is not to suggest that organizations, such as code.org, harbour nefarious intent but rather to signal the very powerful ways that significant players in the global tech industry seek to have influence in discussions about pedagogy, curriculum, and assessment on an increasingly global scale. Returning to the theme of this Special Issue, how these movements are taken up directly and indirectly by governments is of key concern for any discussion around democracy and education.

Finally, what this kind of analysis makes possible is an examination of how this substantiation of "the future" is realized in and through its articulation in broader debates around policy making and policy alignment within and between national borders. While this article is focused on the interface of digital technologies and educational policy at a federal level, this approach also resonates with similar intersections of public and private interests in fields such as development and innovation, public infrastructure, population-level health, and international trade.

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Using the concept of relational justice to apply fairness in schools

Karen Laing
Newcastle University, United Kingdom: *k.j.c.laing@newcastle.ac.uk*
Laura Mazzoli Smith
Durham University, United Kingdom: *laura.d.mazzolismith@durham.ac.uk*
Liz Todd
Newcastle University, United Kingdom: *liz.todd@ncl.ac.uk*

This paper makes the case for fairness as a driver towards the United Nations Sustainable Development Goal of equitable quality education. We outline a dialogic fairness framework attending to the principles of relational justice in both the service of reducing educational inequalities and improving democratic qualities. The prominence of education as a theme in Fairness Commissions from many UK municipal councils afforded the opportunity to find out if and how fairness could be considered a driver of change towards greater equality in education. Our work with the Newcastle Fairness Commission generated a number of principles of fairness and education, as well as a framework to help operationalize these principles in schools, that we detail in this paper. The framework that was generated was one that recognizes fairness as a form of relational justice arising from a dialogic approach. It was based on a process that used multi-stakeholder interviews and a roundtable inquiry. Views arising from the process interviews and roundtable discussion were consistent with other research into young people's understandings of fairness and education. More research is needed to find out how fairness is understood and enacted by education stakeholders and how these conceptualizations, perspectives, and experiences might combine to improve educational equity and democratic qualities.

Keywords: social justice; fairness; relational justice; dialogic

THE ROLE OF FAIRNESS AS A DRIVER OF EDUCATIONAL EQUITY

Education's importance as a key global challenge is suggested by the 4th United Nation Sustainable Development Goal (UN SDG): "Quality education, aiming to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (United Nations, 2018). The other 16 UN SDGs rely on education to ensure the achievement of their targets. Although educational outcomes are internationally regarded as important as one measure of an equitable education system, wide inequalities persist throughout the education system in all countries (Ballas et al., 2012; Wilkinson & Pickett, 2012), including in the UK. In England a 25% of children are said to be not ready to start school and 16% leave without going on to education, training, or employment (Marmot et al., 2010). Children in the UK start school with considerably different levels of resources and display strong patterning by family origin in their attainment at every level (Gorard & Smith, 2010).

Numerous UK initiatives over recent years have attempted to "close the gap" (a term often used to describe the aim of these approaches), with policies focusing on the demand side (socioeconomic inequalities between different groups) and the supply side (inequalities in educational provision) (Nicaise, 2000; Ross, 2009). The main policy approaches aim for equality of opportunities, equality of treatment or equality of outcome, or combine these in a bid to increase social mobility. However, there is considerable debate and controversy with respect to how to interpret and act upon educational inequalities and, indeed, whether schools do much to address variations in educational outcomes between socioeconomic groups (Gorard & Smith, 2010). What is not in question is that marked educational stratification by socioeconomic background is a consistent feature of education systems world-wide. Gorard and Smith (2010) argues that the lack of evidence of schools having done much to dent this at a national level opens up the opportunity to consider other aspects of equity that foster democracy and citizenship activities, including respect, tolerance, and trust. Arguably, the concept of fairness, as we expand upon it in this paper, supports social justice aims that are narrowly focused on stratification and more broadly focused on other aspects of equity and quality in education. In education, fairness is often used synonymously with ideas of reducing inequality, closing the attainment gap and tackling underachievement; yet, what it means and, thus, how it is subsequently enacted is not clearly agreed upon and understood even within these aims. We argue that a broader conceptualization which encompasses these concerns but also goes beyond them is important in foregrounding a broad purpose for education that can encompass the democratic qualities foregrounded by Gorard and Smith (2010).

A further reason to draw on a wider set of social justice aims for education is that it is argued that approaches to tackle educational stratification alone have had little effect at the national level in the UK and have sometimes had negative, unintended consequences (Ball, 2010; Gorard & Smith, 2010). For instance, equality of outcome intentions concerned with equalizing attainment have resulted in policies that are likely to exacerbate the problem. The race to improve PISA scores has led to narrow pedagogy and curriculum that is at odds with evidence on what is needed for 21st Century learning (Sjøberg, 2015). Neither has this race lessened the attainment gap. Policies aimed at increasing choice and selection via testing can favour the advantaged who have access to resources either to exercise choice or provide coaching for selection tests (Gewirtz, Ball, & Bowe, 1993; Reay, 2004, 2012; Vincent & Maxwell, 2016). The aim of closing the gap in educational attainment between economically advantaged and those not so advantaged is unlikely to succeed because policies to increase attainment are likely to impact on all, producing grade inflation and gains for all rather than attending to the gap itself. Policies based on equality of opportunities, such as increasing the school day to make extra-curricular activities open to all or providing a range of support services from the school, have increased the outcomes for some targeted groups but have failed to have widespread impact (Cummings, Dyson, & Todd, 2011). Bøyum (2014) summarizes the limitations of prevailing approaches, such as equal opportunity, as considering educational justice in isolation from social justice considerations in general. Gorard and Smith (2010) makes a similar point, stating that "Education mostly appears to reflect society . . . It is more an epiphenomenon than a determinant" (p. 50).

In a consideration of education in Oceania, Vavrus (2017) discusses how "metaphors and other forms of symbolic language used to describe educational dilemmas shape the responses that are imaginable in addressing them" (p. 5). Fairness is emerging as

conceptually promising in enabling ways to reframe and improve approaches to equitable quality education. Not only does fairness have potential due to its conceptual relevance, but also its use in common parlance makes it possibly accessible to all. Fairness as a concept is used in many different ways to imply a concern with differences in society and carries a normative meaning as something good, an idea which is at once intuitive and instinctive (Gorard & Smith, 2010; Perkins, 2013; Ryan, 2006). A generalizable definition of fairness has to attend to the negotiation of competing interests and, therefore, it makes these competing interests explicit and provides the possibility for some reconciliation of these interests. Fairness may, therefore, qualify, in Vavrus's terms, as helpful language. It is a concept that already has strong traction as a way of focusing attention on finding solutions across a range of areas, as is evidenced by the 30 Fairness Commissions carried out since 2010 by councils across the UK. All have taken as their starting point a conviction that widening inequality is neither natural nor intractable and that it can be tackled, and fairness has been assumed to be a driver in the achievement of solutions. Despite education featuring prominently in all Fairness Commissions, fairness as a concept in its own right has not historically been a driver of policy in education. However, it is becoming more visible internationally. Fairness is one of the values of elementary school reform in Turkey, for instance (Koc, Isiksal, & Bulut, 2007). Fairness was articulated as a concept used by teachers in Nigeria in terms of how they thought about instruction in the affective domain (Olubor & Ogonor, 2007) as defined by listening to, and willingness to participate and to compromise with others. The importance of fairness in terms of participation is exemplified by the involvement of Ghanaian citizens in policy making (Fredua-Kwarteng, 2016). Closing gaps in education requires equity, not uniformity, so in this sense, also, fairness is a useful concept (Thomas & McCormick, 2017).

FAIRNESS COMMISSIONS IN THE UNITED KINGDOM

During the last decade, in a context of long-term national government spending cuts initiated in 2008, known as austerity, local governmental authorities in the UK have searched for new ways to address widening inequalities in their regions and improve the lives of residents. About 30 local areas have initiated Fairness Commissions across England, Scotland, and Wales over the last eight years, tasked with tackling the effects of poverty and inequality at a local level. These sought evidence from local people and made recommendations to local authorities on the actions they could take (New Economics Foundation, 2015). Although it has not been possible to assess the impact of the Fairness Commissions overall, there is some evidence that their recommendations have been acted upon: in raising wages from minimum wage to living wage; in exposing and limiting the activities of payday loan companies; in increasing the membership of credit unions; in improving the accessibility of advice services; and in changing the practices of private landlords on tenancy agreements and housing quality (New Economics Foundation, 2015).

While there has been extensive research exploring the views of young people about education (Lewis & Lindsay, 2000; Reay, 2006; Todd, 2007), there is very little research that seeks young people's views specifically about what counts as fair or otherwise in education. The concept could, therefore, enable us to gain a far better understanding of the range of stakeholder perspectives and hence the optimal way of integrating these to create the greatest possible buy-in. A Fabian Society report (Bamfield & Horton, 2010)

flags the lack of national outcry about the inequalities inherent in our educational system. We would argue that a more accessible concept, able to make explicit the range of differing ways in which stakeholders understand fairness and education, along with an associated framework through which to negotiate these, is needed in order to support dialogue and consensus building. This paper draws on a body of the authors' previous research into fairness and education (Laing, Mazzoli Smith, & Todd, 2016, 2018; Laing & Todd, 2012; Mazzoli Smith, Todd, & Laing, 2017) and particularly our analysis of a range of work produced for the Newcastle Fairness Commission. This is outlined below and underpins the development of our conceptualization of fairness.

In this paper, we focus, in particular, on the work that was commissioned by the Institute for Local Governance to support the Newcastle Fairness Commission by scoping and defining fairness in education, analysing evidence, and suggesting actions. Newcastle is a city in the North East region of England with a strong industrial heritage. With the decline of industry, the city has reinvented itself but unemployment is still higher than the national average and socioeconomic deprivation is widespread. The Fairness Commission was set up in an attempt to make Newcastle a fairer, more cohesive city and the membership was a diverse range of individuals drawn from politics, religion, academia, health, and the charitable and voluntary sector. The Newcastle Fairness Commission was unique in concluding with a set of fairness principles to be applied, rather than a specific plan of action on the city or the nation (Newcastle Fairness Commission, 2012). These can be summarized as: "fair share, fair play, fair go, fair say," which became the title of the report. The thinking was that the principles would be longer lasting than a necessarily time-limited action plan. The aim of our study was to define fairness in education, how fairness was being enacted in Newcastle, and to identify actions that could be taken to ensure Newcastle became a fairer city in respect of education. The outcomes were based on data from:

a) A multi-stakeholder roundtable carried out in 2012 with 14 people representing the academic, local government, school, and charity sectors (including teachers, head teachers and young people) interviews with three people who were sitting on the Newcastle commission and a literature review into fairness and education that led to the writing of a report for the Newcastle Fairness Commission (Laing & Todd, 2012). As part of the roundtable, short provocations were given by two academics, the two headteachers, and a local authority officer.

b) A short paper of ideas and questions for a second roundtable carried out in 2014 on fairness and education, with a group of 17 stakeholders (representing the academic, local government, school, and charity sector) in order to look further at fairness as a possible driver of more equitable education. As part of the roundtable, short provocations were given by two academics, a teacher. and a member of the Royal Society of Arts.

A starting point was to situate the fairness principles agreed to by the Newcastle Fairness Commission in the context of education. Fairness in education needs to apply to people of all ages, not just children, and our research aimed to draw attention to this wide focus. However, the limited time for our enquiry meant that examples are more often drawn from schooling than from the various guises of adult learning. The interviews and roundtable discussion were recorded and analysed for themes which were translated into a range of broad meanings of fairness. It was important to include children in our enquiry

since their position as experts on their experiences of schooling and education gives them a role, but we were mindful of the need to enable them to take part in the roundtable in ways that were comfortable, appropriate, and where they felt freely able to contribute should they want to, but could choose not to (Laing & Todd, 2012; Todd, 2007). Two children aged 14 were accompanied at the roundtable by a teacher. One chose to write a story on his ideas about fairness focused on a boy who received free school meals, and this was a secret from other children but one day a teacher told everyone. He wrote that "Fairness is when people can do what other people do." It is important that children are included in consultations about what is fair and unfair since there is evidence that their sense of fairness is sophisticated. Previous essentialized psychological ideas of children's moral understanding have been challenged (Smith, 2002). More is now understood about children's conceptions of fairness across different contexts and cultures and how their sense of fairness is shaped in part by cultural practices, values, and norms (Barrance & Elwood, 2018; Blake et al., 2015; Kajanus, McAuliffe, Warneken, & Blake, 2018; Laddu & Kapadia, 2007; Zhang, 2016).

THE EMERGING FAIRNESS FRAMEWORK

We identified a variety of understandings of fairness from the interviews and roundtable of informants in our study. These understandings influenced how policies were implemented at a local level, and also influenced expectations that professionals had in respect of individual children. Achieving fairness in education was seen to be predicated on choices that were made by individual educational leaders. For example, one headteacher told us of a choice headteachers felt that they had to make in the context of austerity: to focus their attention and resources on raising achievement so that all children achieve a minimum standard or targeting those resources towards children who, with additional support, are capable of achieving the highest standards. Which approach is deemed fair will differ between headteachers and either choice could be justified as fair depending on the underlying values and principles brought into focus. In this way, schools were seen to be in a position to promote fairness within their contexts but also face difficult choices without necessarily having structures in place to support the evaluation of competing aims.

Building on Jacob's (2010) three-dimensional model of equal opportunity and the six areas of justice proposed by Gorard and Smith (2010), we were able to identify seven broad meanings to define fairness in education:

1. Fair process as being treated the same
2. Fair process in the way that different provision is allocated or experienced
3. Fairness as minimizing divergence in educational attainment across social groups
4. Fairness as achieving the same standard
5. Fairness as meeting the needs of diverse individuals
6. Fair participation in decision-making
7. Fair participation in learning.

These open up space to identify areas of tension and contradiction in policy and practice because these principles take full account of fundamental tensions, for instance, of fair process in treating people equally (principle 1) and fairness in terms of meeting diverse individual needs (principle 5). Our enquiry, therefore, uncovered a multifaceted understanding of what counts for a fair education. It was not only about equality, for

instance with respect to opportunities and resources, but also equity with respect to outcomes about embracing diversity. Points made at the roundtables commonly included the following:

> Fairness needs to be careful not to focus on one thing, e.g. attainment gap and income, as there are other ways fairness needs to be considered: age, gender, disability, ethnicity, for example.

> Collaboration between schools is potentially very useful for fairness—schools have more equality of provision (particularly when resources can be shared and there are economies of scale) and better consistency in provision.

> Don't just focus on the obvious (i.e. results) (e.g. equivalent of toxic waste in environment)—need to think of education as wider—Special Educational Needs, play, lifelong learning 0-90yrs.

> It (fairness is) about poverty related to education, education linked to poverty. Economic policy link to education policy.

> Everyone leaves school knowing what they're good at.

> Is support available and do people feel not stigmatized to access it. Is there a culture of community support?

> "Nothing about me, without me"—Children should not have decisions imposed without taking part in the decision.

> Chance to meet people from different backgrounds/careers/experiences.

This was a heterogeneous conceptualization of education and fairness, and therefore our understandings go further than Rawls' (1972) principle of fair equality of opportunity and his related concept of distributional justice; although, we do agree with Rawls' identification of fairness as a foundational concept in his theory of "justice as fairness"

RELATIONAL JUSTICE AND EDUCATION RESEARCH

Fairness is a word used throughout society to describe, justify, and contextualize our interactions with each other. It is, therefore, a fundamentally relational concept, which is meaningful only in considering others. However, decisions are often taken about the distribution and redistribution of educational resources based on considerations of what constitutes fairness at either individual or group level. A distributional approach to social justice is inadequate without including a more holistic conceptualization of social life. Our understanding of fairness thus encompasses another idea with respect to social justice: that of relational justice. We suggest relational justice is a broad term that can be used to cover a variety of forms of justice and which draws on different antecedents, but which clearly positions interpersonal relationships and the social context as being critical in considering social justice claims. We, therefore, draw on relational justice in recognition of the centrality of the nature of the relationships that structure society (Gewirtz, 1998) and which must then structure any consideration of fairness. Relational justice might include considerations of distribution as well as procedural or cultural aspects, but it is about more than these, as discussed by Gewirtz:

> It is about the nature and ordering of social relations, the formal and informal rules which govern how members of society treat each other both on a maccro level and at a micro interpersonal level. Thus, is refers to the practices and procedures which

> govern the organization of political systems, economic and social institutions, families and one-to-one social relationships. (p. 471)

We have previously drawn on Gewirtz (1998) to explore two concepts of relational justice: justice as mutuality and justice as recognition. Justice as mutuality is encapsulated by Etzioni's (1995) theory of communitarianism, in which citizens are bound together through a system of duties and mutual obligations. There is neither excessive autonomy, which erodes society, nor excessive collectivism, which erodes individual autonomy. Our previous research (Laing et al., 2016) identified that educational professionals saw "justice as mutuality" and the need for fair participation within a community as important to their practice of education. Further research with young people in different school contexts (Mazzoli Smith et al., 2017), showed how important the quality of interpersonal relationships was to understandings of fairness and of student engagement and successful learning experiences, whatever the school context. Pupils articulated a belief in how discrimination and lack of respect impinged on a basic inviolable right to self-determination and almost all forms of discriminatory practice were deemed unacceptable. There were, therefore, concerns about equality of outcome aims compromising relational justice through discrimination based on difference claims, with widening participation programs, for instance, mentioned as entrenching, not eroding, divisions in the system and, therefore, compromising relational justice. The students in this study tended to prioritize respectful, egalitarian relationships over differential treatment according to need or other forms of distributive justice based on outcomes. However, the latter was described as fair in particular cases when it did not violate key rights of other students.

We draw on Fraser's (1997, 2008) ideas about fair participation, named as both recognition and representation. Recognition is about who counts and is valued, and representation is to do with who is involved in taking decisions about redistribution and recognition. Relational justice is allied to the concerns of justice as recognition and as such demarcates a significant development from the Rawlsian concept of distributive justice (Rawls, 1972). Fraser's (1998) development of Rawls rests on the proposition that redistribution and recognition are not independent conceptions of justice, distinct from each other; rather, some concepts, such as gender and race, may require both kinds of justice to fully deal with them. Fraser, therefore, proposes a bivalent concept of justice, which draws on both redistribution and justice, but neither is subsumed by the other. So, for the students in our study (Mazzoli Smith et al., 2017), redistribution and recognition would have to be understood as bivalent in Fraser's terminology: linked but not reducible to each other.

This research identified the usefulness of advancing a concept of relational justice in its own right because it foregrounded the fact that students described the centrality of relationships in considerations of both distributive and recognitive justice. We (Mazzoli Smith et al., 2017), therefore, argued for the more explicit development of educational policy based on relational justice. Education policy is not likely to be informed by relational justice, however, as its units of interest tend to be either the individual or the group and, as such, we suggested that this, along with the concept of "stakes" fairness (see Jacobs, 2010), might be considered a policy vacuum. There is some reference in educational research to allied concepts, such as relational equality or relational equity, which indicates some interest in foregrounding the relational aspects of social justice considerations. For instance, Winter (2018) draws on a concept of relational justice

informed by Fraser to consider "relational equality" at the macro, meso, and micro levels of social life. Winter finds that a broad focus at all these levels leads to challenges in terms of ascertaining how to evaluate equality and/or justice and, so, she suggests schools may want to focus on the meso level wherein they have control over the quality of the relationships that pertain. This has parallels with Gorard and Smith's (2010) focus on schools as "mini-societies in themselves" (p. 60). Winter draws on the affordances of humanistic counselling skills to improve the quality of relationships while Gorard and Smith draws on the importance of pupils enjoying mutually respectful relationships with adults in helping to shape the kind of society we would like.

Boaler (2008) utilizes the term "relational equity," to describe equitable relationships in classrooms; that is, students treating each other with respect and considering other points of view fairly. Boaler also contrasts this with outcomes-based measures of equity, so the focus is shifted from measures of achievement between students to the quality of relationships between them. For Boaler, relational equity depends on the three qualities of: respect for other people's ideas, leading to positive intellectual relations; commitment to the learning of others; and learned methods of communication and support. Boaler's definition of relational equity highlights the need for both a social aspect, seen through respectful communication, and an intellectual aspect, seen through the ability to think critically and reflectively in order to accommodate the differences between students working in groups and maintain "positive intellectual relations" (p. 174).

HOW CAN FAIRNESS BE OPERATIONALIZED?

A main theme from the analysis of interviews and the roundtable discussion was that fairness entailed some form of progressive universalism that recognizes equitable provision for all children, but that some form of targeting would be necessary with a scale and intensity proportionate to some assessment of need. Targeting could be in terms of access to resources, such as additional teaching, out of school activities, or coaching and mentoring. This has similarities in the approach needed to reduce inequalities in health (Marmot et al., 2010). We also identified a clear strand of critical and reflective thinking about the nature and purpose of education, and about the ways that the identity and abilities of a child are a reflection of the socio-cultural culture that includes home, school, and community rather than aspects of an individual identity. We identified arguments being made by our informants for the need to develop a more holistic, locality-based educational provision, the need for more collaboration between schools, and the wish to offer a range of activities and services from schools for families and the community.

Decisions on what action to take to improve fairness were, therefore, context specific, and dependent on the view of fairness adopted. Fairness in education is also a process, likely never to be arrived at given its attendance to multiple perspectives, which must continually be made explicit through dialogue in order for there to be negotiation and the likelihood of meaningful outcome. Our roundtable was an example of a dialogic process about these competing claims of fair education, and the roundtable discussions recommended the need for dialogue within and between schools and other stakeholders in education to arrive at a conception of fair education.

> We need some kind of audit—to find out about and encourage collaboration and shared resources.

> Some kind of review—to find a more integrated approach—need to look at how joined up local authority departments are.

> A difference friendly world—How would you assess difference? It's about valuing difference.

While it is not difficult to identify instances of unfairness in schooling as experienced by individuals, including by those who go on to succeed in the education system, there is no single initiative or action or even sets of actions that will improve fairness in education in a generalizable way that could have comprehensive buy-in. It depends on many aspects of a situation, the people involved, and the resources available. Therefore, we devised a fairness audit that could be conducted as a reflective and inclusive exercise, designed to enable thinking and understanding across and between stakeholders within an educational establishment or across a number of establishments to enable them to prioritize action together through making explicit what constitutes fair education. This was a process designed for the city Council itself, with its partners, with the aim of surfacing meanings and tensions and encouraging practice that is effective, critical, and informed. This was to be seen as a tool for staff development and reflective practice rather than representing a pass/fail standard. A fairness audit was devised with the following qualities—the "five Cs" (Laing & Todd, 2012):

1. **Contextualized**—by taking account of the current context and examining practice within, between, and beyond educational institutions. An audit of fair practice in education should take account of the context within which fairness is enacted and examine not just the practices within educational institutions such as schools but also examine practice between and beyond them. Staff should reflect on how these different interlinking contexts provide opportunities to enact fair practices.
2. **Collaborative**—with all those involved in delivering and participating in education. Dialogue about fair educational practices should include all those with an interest in education, including children, young people, and parents and carers as well as staff and external partners. Collaboration and discussion can help to uncover differing understandings of fairness, facilitate consensus building, and lead to effective action.
3. **Critical**—the importance of a dialogic process to critique policy, practice, and the language we use to talk about education that might draw on the traditions of action research or use theory of change approaches, possibly supported by an external "critical friend," making use of educational research findings. This can serve to challenge negative assumptions and expectations about disadvantage and provide new ways of thinking.
4. **Capability-driven**—concentrating on expanding the capacities of young people and valuing their contributions. A fairness audit should prioritize valuing the contribution and identifying the capacity of young people as opposed to focusing on deficits. Investigating how an educational system or institution restricts capabilities in respect of, for example, gender, ethnicity, or disability can facilitate this.
5. **Conceptualized**—making sense of the situation and prioritizing action. A fairness audit will identify and reflect on different enactments of fairness in the school system and recognize where fairness is compromised. It concludes by making sense of the situation at hand and identifying priorities for action.

A DIALOGIC FAIRNESS FRAMEWORK DRAWING ON THE PRINCIPLES OF RELATIONAL JUSTICE

We suggest that this audit framework draws on the main premises of relational justice in order to increase the breadth of social justice claims that are routinely drawn on in education and because of the clear fit between these premises and those found in our work outlined above. Gewirtz (1998) highlights the practical possibilities inherent in utilizing relational justice in this way, in that "[a] focus on relational justice can force us to think carefully and systematically about what treating each other with respect and conferring dignity on others actually means in different contexts" (p. 472). Gewirtz draws on Young's (2011) approach to social justice, in particular, as one which should support a more context-sensitive understanding, central to the findings of our work in the Fairness Commission. Young's approach attempts to extend the concept of distribution beyond material goods to phenomena such as power and oppression and, in so doing, offers a useful way of conceptualizing social justice and, we would suggest, fairness claims in differing contexts. The approach recognizes that the logic of distribution treats non-material goods as identifiable things or bundles, distributed in a static pattern among identifiable, separate individuals. The individualism assumed in this distributive approach to social justice and foregrounding of individuals and structures often obscures issues of dominance and oppression, which requires a more process-oriented and relational conceptualization (Young, 2011, p. 8).

A focus on process in such an in-depth way brings into view the differences between subjects where, in a primarily distributive view, assumptions of impartiality hide the realities of decision-making processes in context, which, in turn, depoliticizes public policy formation and undermines opportunities for the democratic process. Justice as recognition means attending to the differences and relationships between subjects and, thereby, the social processes of decision-making in context, attending to social relations, power, oppression, and self-respect, which cannot be considered as static. The fairness audit was designed to take account of these issues and then, in turn, these contextual, relational, and procedural aspects were endorsed by the stakeholders and exemplified in the democratic qualities of the Fairness Commission. Young (2011) notes that a highly individualized, ahistorical understanding of justice (her critique of the distributive model) fails to account for how much individual identities and capacities are produced as a result of social processes and in relation with others. These identities and capacities are also produced over time, so a measure of distribution and outcomes at one point in time fails to account for the temporal nature of social relations. This, we would argue, supports our focus on fairness as a process, never achievable but supporting what should be an ever-present, ongoing negotiation of the perspectives on which decisions towards the aim of a fair education system can best be made. This relies on a more democratic process than a top-down principle-based decision about distributive justice might.

Young (2011) was also concerned about the way in which the normative is overlooked in political science so that, too often, structures that should be considered evaluatively are taken-for-granted. Along with social scientists such as Sayer (2005), Young (2011) critiques the routine separation of the empirical and the normative in social science, such that social justice can be researched and theorized abstracted from actual social contexts:

> The ideal of impartiality is an idealist fiction. It is impossible to adopt an unsituated moral point of view, and if a point of view is situated, then it cannot be universal, it cannot stand apart from and understand all points of view. (p. 104)

For Young (2011), claims can too often be abstracted from "some substantive premises of social life" (p. 4), which are necessary in order to arrive at useful measures of justice and injustice. Gewirtz and Cribb (2002) make use of this point in reference to a tendency in sociological analysis that they call "critique from above," something that takes place at a distance from the realm of practice and, therefore, without consideration of the situated nature of the justice considerations that are made. For instance, the practical difficulties for teachers in resolving or accommodating the tensions in implementing socially just practices are too often overlooked (Gewirtz & Cribb, 2002). We suggest that the fairness framework presented here takes account of the situated nature of justice considerations through its contextualized and conceptualized qualities, avoiding deference to an abstracted view of social justice concerns.

Gewirtz and Cribb (2002) further note "a common failure to adequately engage with the tensions that may arise between different facets of or claims to social justice" (p. 499), which results from the failure to appreciate that social justice is plural (Gewirtz, 1998), demanding both distributive and recognitive considerations and surfacing tensions in the process, as these are likely not to neatly align into one clear course of action. For Gewirtz and Cribb (2002), it is, therefore, important to adequately engage with these tensions, such that the work of practitioners of various sorts can be supported. We suggest that the collaborative approach that underpins the fairness audit foregrounds these tensions and supports democratic processes by affording recognition of competing views. Recognitive justice is likely to attempt to balance the apparently oppositional moral obligations of difference, and solidarity. This is, then, "valuable because it can inform more socially just micro practices" (Gewirtz, 1998, p. 476). The focus on what people do and how this is patterned changes the way we approach key issues in education, such as opportunity, for instance. From a relational perspective, opportunity is a concept of enablement, as opposed to a possession as it would be thought of from a distributive one and it, therefore, refers more to "doing" than "having"': "A person has opportunities if he or she is not constrained from doing things and lives under the enabling conditions for doing them" (Young, 2011, p. 26). At its simplest, this will mean that children do not all have equally enabling opportunities, even when the same resources are devoted to them through the structures of economic distribution. This is taken account of by the audit's focus on capabilities and criticality in terms of reflecting on the policies, practices, and discourses of education.

CONCLUSION

In this paper, we suggest that fairness as a concept can encompass a less instrumental, broader understanding of equitable quality education than that of just raising the educational attainment of the most disadvantaged, or closing educational gaps, important though these are. We then argue that what is needed is a process whereby policymakers, in collaboration with schools and local stakeholders, engage over time to audit the fairness of their policies and practices, to open up space to understand different interests, and critical appraisal of areas of contradiction, in order to develop an education system which many more see as fair. The fairness audit process outlined above, resulting from initial work carried out for one of the many UK Fairness Commissions and integrating research carried out by the authors, suggests one way in which fairness can be operationalized as a concept with the aim of maximum buy-in from stakeholders. It also draws on an area of theorizing about social justice, which, we argue, is under-utilized in

education but foregrounded by young people in one of our studies where fairness was put under the spotlight. We argue, therefore, that the strengths of this approach, harnessing the concept of fairness, allied to the principles of relational justice, in a dialogic fairness framework, are that it is likely to make explicit and provide the possibility of negotiating conflicting views, take account of context and temporality, support democratic qualities, and go beyond the widespread problem in educational theorizing focusing either on the individual or the groups at the expense of the relationships that structure these. More research is needed to reveal further how fairness is understood and enacted by education stakeholders and how these conceptualizations, perspectives, and experiences might combine to drive a reduction in what is widely perceived to be an unfair educational system in the UK and in other nations.

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