

Background paper for the Futures of Education initiative

A profession learning to become: the promise of collaboration between teacher organizations and academia

by J-C Couture¹, Roar Grøttvik² and Sam Sellar³

¹University of Alberta, Canada; ²Union of Education, Norway; ³Manchester Metropolitan University, UK

September 2020

This paper was commissioned by UNESCO as background information to assist in drafting the Futures of Education report to be published in 2021. It has not been edited by UNESCO. The views and opinions expressed in this paper are those of the author(s) and should not be attributed to UNESCO. This paper can be cited with the following reference: Couture, J.-C., Grøttvik, R. and Sellar, S. 2020. A profession learning to become: the promise of collaboration between teacher organizations and academia. Paper commissioned for the UNESCO Futures of Education report (forthcoming, 2021).

Abstract

While the flourishing transdisciplinary field of futures studies has contributed to the production of educational imaginaries and policy mobilizations, for a number of reasons these formal efforts largely reside in the hands of those outside of the teaching profession. Through an analytical framework that maps the ways that teacher organizations currently ‘use the future’, the paper explores the question: How can teacher unions engage with the academic community to ensure that professional understanding shapes knowledge production and governance in education? Teacher organizations face diverse operational and strategic challenges amidst the growing precarity of public education globally. However, the core commitments of care and solidarity as counter narratives to intensive capitalism offer an invitation to consider new ways of working with academia to ensure that professional knowledge shapes knowledge production and governance in education. Such collaborations also offer educational researchers opportunities to pursue impactful critical research with the teaching profession and the communities it serves. Two case studies from the Union of Education Norway (UEN) illustrate possibilities for teacher organizations to democratize educational futures: the development of a strategic plan for research to redesign the profession’s relationship to research communities, and an international network of schools to rethink teaching and learning in mathematics. Both case studies, as well as other nascent possibilities on the horizon, illustrate how new approaches to futures thinking can help forge more sustained relationships between teacher organizations and academia.

Introduction

UNESCO’s *Futures of Education – Learning to Become* initiative looks towards the horizon of 2050 and positions education as a critical site for ensuring sustainability amidst global transformation. The call for “broad public engagement [and] expert inputs” (UNESCO, 2019a) to inform the final report of the Independent Commission requires the involvement of the teaching profession and its organizations globally. The profession ought to contribute to these conversations and to much-needed conversations about the purposes of education and the role of teachers in the pursuit of these aims. Conversations about the aims of education are necessarily oriented towards the futures that different groups imagine and desire, and in this paper we examine: (1) the profession’s current engagements with futures thinking and the growing field of futures studies; and (2) what might be done to enhance the profession’s capacities for future-oriented knowledge production and governance. This background paper thus addresses the following question: *How can teacher unions engage with the academic community to ensure that professional understanding shapes knowledge production and governance in education?*

Collaborations with academia can enhance the capacities of the teaching profession to engage in future-oriented knowledge production. Of course, teachers already produce and shape knowledge in meaningful ways in their professional lives, but both teacher organisations and academics can benefit from boundary-crossing collaborations that focus on the futures of the profession. This paper provides two case studies that illustrate how the profession can mobilise futures-thinking in education, amidst the precarity of public education globally (jagodinski, 2018), by co-producing research with academic partners. These examples demonstrate how unions and academics can collaborate to design and conduct “research projects, empowering them to act on alternatives to ‘business as usual’ (Gidley, et al, 2009: 430). This work can build on the flourishing field of futures studies and its efforts to theorise and confront in new ways the common and diverse issues that communities face globally. Futures studies is an amalgam of transdisciplinary research taken up by practitioners whose

primary concern is not discerning what the future will be but how particular images of the future are mobilized for a variety of purposes. While challenging, this work can lead to promising, creative partnerships (Miller, 2018, McDowell, 2019), while contributing to more participatory and innovative policy futures (Candy & Potter, 2019).

The paper is divided into four main sections. The first section explores how educational futures are currently imagined in global policy contexts and the need for broader and more democratic imaginaries. The second section describes different approaches to futures thinking in teacher organizations and introduces our analytical framework. The third section develops two case studies from the Union of Education Norway (UEN): that the first illustrates how the UEN is repositioning itself as a producer of knowledge about teaching and learning, and that the second describes a three-year international partnership with schools and researchers that focussed on rethinking success in mathematics. The concluding section provides additional brief examples of further directions for collaborative futures thinking across union and academic boundaries.

Democratizing uses of the future: who is imagining what, for whom and why?

The handshake between foresight and formulating strategy is a critical driver of knowledge production and governance across multiple sectors such as business, administration and the military (Fuerth & Faber, 2012; Kaivo-oja & Lauraeus, 2018: 35). This relationship is a part of the legacy of more than 40 recognized graduate programs in foresight offered globally (Dawson, 2020). Emergent futures thinking and transdisciplinary foresight research seeks to democratize futures by providing tools for thinking about the Volatile, Ambiguous, Complex and Uncertain (VACU) world we inhabit (Lawrence, 2013). The challenge is not enhancing our ‘cognitive headlights’ to see further into the future, but engaging the interrelationship between human subjectivity, agency and governance in order to understand how anticipations of the future often express our contested understandings about presents and pasts (Candy & Potter, 2019; Bussey, 2019; Inayatullah, 2008 & 2019; Heike, 2019; Miller, 2018; Motti, 2019; Silova, 2020). Those with the greatest capacity to imagine the future and to ensure that these imaginaries prevail over others generally produce the futures of popular imagination and corporate strategy. The critical question for futures studies is how might we democratize the way *the future* is constructed and mobilized (Urry, 2016: 2-13). The urgency of broadening conversations about educational futures, to include not only teachers but also students, families and communities, has become particularly apparent amid the COVID-19 pandemic. The pandemic has interrupted futures that are imagined as linear extensions of the present and has left educators, parents and students grappling for alternatives to the dissatisfying corporate vision of ‘personalised’ online learning that clearly does not advance many of the most important aims of education.

Despite burgeoning support for foresight and futures research, a lack of sustained commitments and incentives in the teaching profession have created a predicament in which futures work resides largely in the hands of those outside of the profession.

Apart from some Think-Tanks or specialised future-oriented organisations, very few individuals have the opportunity or the responsibility to follow the multifaceted and substantial changes in the social, ethical, technological and cultural environment, and the possible educational implications. Hardly any government agencies and certainly not municipalities, schools or teachers engage in this. The field of education is also very fragmented in terms of professional expertise and mission, which is a serious problem for education in general and future orientation in particular. (Jónasson, 2016: 9)

The current constellations of futures studies range from the utopian to dystopic and altruistic to predatory, producing multiple futures ranging from a world of endless technological advances and plenitude to apocalyptic visions of a damaged planet where the end of humankind is the inevitable result of our avarice and lack of foresight. In this context, the teaching profession and its organizations has a responsibility to consider how its uses of the future can contribute to collective efforts to ensure that “knowledge in its many forms becomes a global common good to the benefit of humanity and the planet” (UNESCO, 2020a: 1).

This historical moment is increasingly critical in light of the growing influence of policy actors such as the OECD in the global response to the pandemic. The OECD recognises the importance of futures thinking and established a dedicated strategic foresight unit in 2018, with “the aim of building foresight intelligence and futures literacy to ensure that development co-operation policies stay relevant and fit for the future” (OECD, 2018a: 258). With the publication of *Spotlight: Quality Education for All During Covid -19 Crisis*, (Petrie et al, 2020), the OECD has laid out its vision for educational development – one that sees the disruption triggered by the pandemic as a catalyst for fundamental change. Signalling what this vision entails, the head of the OECD’s Directorate of Education and Skills laments that “on average across OECD countries, just about half of 15-year-olds are in schools with an effective online learning support platform”; however, “while our school systems were sleeping, organisations like HundrED have spent years to mobilise, curate and share the world’s most innovative learning environments” (Petrie, 2020: 4-5). This statement illustrates how powerful actors within the global network governance of education are promoting their visions of the future in the present moment of an imagined post-pandemic world. Here, “the supervalence of the future” (Grosz, 1999: 7) functions as an absent presence to be leveraged in the service of mobilizing neoliberal policies and the commercialisation of education.

Perhaps no other development has produced more scholarly attention in the past two decades than analyses regarding the growing influence of the OECD as a policy actor and its role in mobilizing the research generated by the Programme for International Student Assessment (PISA). More recently the prospect of a re-design of PISA 2012 to mobilize and measure the construct of ‘global competencies’ as part of its Education 2030 reform initiative, has garnered considerable attention from teacher organizations and researchers (Auld and Morris, 2019; British Columbia Teachers’ Federation, 2019; Chandir, 2018; Engel, Rutkowski, & Thompson, 2019). The new Learning Compass that was developed as part of this initiative reflects a desire to increase the impact of the OECD’s education work in schools and classrooms. This desire to influence curriculum reform globally will certainly be emboldened by pandemic crisis and the historical moment framed in terms of “[e]ducation disrupted – education rebuilt” (Petrie, 2020: 4). Parallel to Education 2030 is the effort to produce the teachers needed for ‘Future Ready’ students through the International Summit on the Teaching Profession and the administration of Teaching and Learning International Survey (TALIS), a research collaboration between the OECD, Education International and its member organizations (Sorenson, 2020).

The success of the OECD in mobilizing its data infrastructures into what is now a global research phenomenon was evinced on December 3, 2019 with the release of the PISA 2018 results. The results release was undertaken in partnership with the inaugural Forum of World Education, a two-day event hosted by the OECD in Paris to address the question of ‘The Future of Education: Where do we go from here?’. Billed as the “Davos of Education”, the event highlighted the role of the OECD in promulgating particular views of the future and the role of education in creating that future (Addey and Verger, 2020). Setting aside well-founded critiques of both PISA and TALIS, from the perspective of futures studies, it is helpful to consider both efforts as “future-generating research” (Gergen, 2015) driven by anticipatory impulses that mobilize research “not to illuminate *what is*, but to create *what is to become*” (2015: 294).

'Powerful futures' such as those mobilized by the OECD and new networks of corporate and philanthropic actors offer up visions of a post-pandemic global future focused on innovative technologies and reconceptualizing schools. While policy actors such as the OECD have increasingly occupied the space of a global education 'reimagined', now is the time for the profession to take up the opportunity to move beyond a global education narrative that promotes some futures and not others. Zhao and Gearin (2018) offer insight into what drives the ascendancy of powerful futures promoted by networks of governments, international organizations, corporations and philanthropies. Pointing to the power of imagination and story-telling to mobilize "the national visions and imaginary *futures* that nations seek to make reality" (Zhao & Gearin, 2017: 7), the authors suggest we should momentarily step back and ask each other: "*What do you want me to imagine and why?*" (4). We must also ask for whom global futures are imagined and by whom (Pashby, 2012)? These questions encourage alternatives to a Global Education Narrative focused on international benchmarking, policy borrowing and commercialisation.

Now is the time to rejuvenate conversations about the aims of education and the role educators should take in responding to impending environmental collapse, technological disruption, looming economic crisis and the ongoing pandemic. Are we finally prepared to enact a "cosmopolitics" through a new political ecology that includes all life forms (Stengers, 2019: 151-156)? With the emergence of AI, what will it be like to live as a 'human' when our machines know us better than we do?" (Harari, 2020). Will the pandemic and the unprecedented interventions by governments signal the 'end of globalisation' on a damaged planet (Braidotti, 2019) and the retreat of capitalist realism? Are we open to counter the prevailing notion that there is no alternative to capitalism (Yosef-Hassidim, 2018: 55)? Can we imagine educational futures 'otherwise' from current colonial relations of power (Andreotti, 2011)? These are just some of the questions that demand a stronger role for the profession in futures thinking to enhance its contribution to knowledge production and governance. Until the recent global pandemic, and the ascendancy of capitalist realism (Fisher, 2015) amidst impending environmental collapse, many commentators had written-off the possibility of reimagining alternatives to the current global order. Yet, as Arjun Appadurai, a member of the International Commission on the Futures of Education, has optimistically observed, because of the pandemic, "(w)e are not so narrowly human anymore" (Appadurai, 2020). This is the promise of the present moment for the teaching profession.

Teacher organizations using the future: from exhaustive pragmatics to participatory futures

In this section we discuss the efforts of teacher organizations to mobilize research and strategic foresight along a continuum from predictive approaches to interpretive, critical and participatory approaches (Inayatullah, 2013: 42). We illustrate changes in thinking about the future and anticipatory governance that are required by teacher organizations to shift from a focus on prediction and control to producing new futures in the midst of the VACU world that is increasingly their operational ecology.

"All attachment is optimistic", writes Lauren Berlant (2011), and from her work we see how teacher organizations implicate themselves in "animating a sustainable fantasy" that education can address systemic societal and environmental issues. At the same time, teacher organizations also continuing to pursue "exhaustive pragmatics" (Berlant, 2011: 261) in anticipation of addressing the increasingly untenable conditions of practice teachers face globally. A significant body of research has documented the internal and external operational challenges encountered by teacher organizations as they attempt to strengthen the professional and

social justice ethics of their work, while sustaining the industrial relations project of addressing teachers' conditions of practice (Bascia & Osmond, 2012, 2017; Stevenson, 2017; Couture, 2015; Stevenson, 2008; Stevenson & Gilliland, 2015; Naylor, 2005). Globally, the efficacy of teacher organizations in juggling these broadening and ambitious mandates continues to be a subject of much debate (Bascia & Stevenson, 2017; Compton & Weiner, 2008; Kelly, 2015). Berlant's (2011) notion of "exhaustive pragmatics", driven by attachments to the ideals of continuous progress and the inevitability of societal improvement, offers new ways of considering the paradoxical relationship between anticipation, agency and governance for teacher organizations as they navigate the increasingly complex policy issues and networks of policy actors shaping education reforms locally and globally.

There has been relatively little systematic long-term analysis of the impacts of the strategic foresight activities of teacher organizations in their operations (Couture, 2015). One important contribution to addressing this gap is an analysis of the efforts of the New South Wales Teachers Federation (NSWTF) to counter neoliberal policies in the Australian context between 1985 and 2017 (Gavin, 2019). The challenges faced by the NSWTF and shared globally by teacher organizations have seen unions continually shifting their operational priorities along three trajectories (Carter et al, 2010 as cited in Gavin, 2019). At times, the NSWTF achieved gains through negotiations and *rapprochement* by trading off working conditions for salary improvements, then shifting to *resistance* through industrial action when progress stalled. Over the long-term however, the strategic challenge remained: the need to build member commitment and organizational *renewal* to achieve a collective commitment to improve professional development and advocacy for public education.

Navigating the three trajectories of resistance, *rapprochement* and renewal reflects the need for unions to concede tactically on short-term issues in order to prevail on long-term priorities (Davidsson & Emmenegger, 2013). Teacher organizations typically resort to tactics of resistance such as industrial action when few options appear viable. Meanwhile, efforts to mitigate a labyrinth of reforms ranging from the systemic pressures of privatization and commercialization to episodic attacks on teachers' professional autonomy involves an intricate balancing-act of prioritizing and addressing members' concerns, while maintaining meaningful relationships with decision-makers and influential policy and media actors. Ultimately, this advocacy 'triage' plays out while organizational renewal remains an ongoing challenge given that engagement of all members of the profession is a critical ingredient in building the long-term collective efficacy of the profession, especially by including school leaders in teacher unions (Fink, 2017).

Difficulties can arise when the most intricate organizational plans and strategies fail to recognize that "feral futures" (Ramirez, & Ravetz, 2011), such as impending environmental collapse or the current pandemic, are not unpredictable 'black swan' events but manifestations of the hubris of human exceptionalism and the failure of current approaches to anticipatory governance (Avishai, 2020; Inayatullah & Black, 2020). As well as the challenge of see-sawing between tactics and strategy, member engagement is diminished when all too frequently union leaders are overly concerned with influencing "the Capital": a small number of policy makers and education officials who might be considered open to persuasion and the force of evidence and rational argument (Evers, 2019). This is paralleled by a preoccupation with a "byzantine meeting culture" where union officials seek the approval of assemblies passing seemingly endless resolutions while ignoring opportunities for "organizing and networking in the capillaries of the schools" (Evers, 2019: n.p).

While recognizing the operational entanglements of 'exhaustive pragmatics', Figure 1 considers teacher organizations' uses of the future within the historical context of the ethical commitments of teachers, individually and collectively, to the two commonplaces of pedagogical relationships: *care* and *solidarity* (Macgilchrist, 2019: 85). These ethical commitments anchor the consideration of the profession's aims and agency in relation to its 'uses of the future'. Figure 1 maps illustrative examples of teacher organization activities

tied to research and foresight across the four futures orientations delineated by Inayatullah (2013: 42): predictive, interpretive, critical and participatory (or action learning).

Predictive futures focus on optimization and control (Gidley, 2013) through neo-liberal forms of governance enabled by the development and mobilization of standards and accountabilities (Brown, 2017). For teacher organizations, one of the most impactful manifestations of this orientation is the proliferation of international large-scale assessments (ILSAs) alongside jurisdiction level standardized testing programs that make education spaces more legible for governing through a form of epistemological governance (Lingard and Sellar, 2016). For ministers and policy actors invested in predictive visions of the future, the anticipatory governance project is “to make hard decisions with soft numbers” (Ravetz 2002). These data infrastructures are considered productive enablers of reform by many governments and other policy actors, and by opposing them, teacher organizations are immediately positioned as denying or ‘cancelling’ a calculable, profitable and promising future for young people. Teacher unions in different contexts have employed different tactics of rapprochement and resistance in relation to large-scale assessments, new modes of accountability and predictive futures premised on this policy instruments.

The transition to *interpretive futures* is marked by a post-positivistic break that enables valorization of the multiple “past futures” across cultures and history that have been previously marginalized and which stand as a testament to the productive capacity, diversity and resiliency of humankind (Urry, 2016: 18-20). As Carlo Levi (1956), the Italian writer and activist memorably observed, “Futuro Ha Un Cuore Antico” (the future has an ancient heart). Transdisciplinary futures writers and performers (Duncheon & Tiereny, 2013), recognize that the “future, like the historical past is an ideologically inflected space and as such has already been seized and defined” (Baudemann: 133). Drawing on hermeneutics through the opening up of previously marginalized perspectives, indigenous futurisms offer rich productive possibilities for critically re-evaluating possible ways of being and living together (Dillon, 2016; Matters, 2019; Fricke, 2019; Tiger, 2019). As Thomas King (2013) wrote, because indigenous histories were not considered usable by Western culture, the cancelation of their futures ensued. As well, the productive capacity of Afrofuturisms through the arts (Hamilton, 2017) promises to mobilize new ways to imagine advocacy for social justice and equity, including through social movements. The deep phenomenological thread running through the interpretive orientation has also incited important questions that teacher organizations need to consider in their future advocacy for public education. These include the invitation to ask ‘what is the publicness of public education?’ (Biesta, 2020). This question challenges deeply held assumptions by policy actors that there is universal agreement on how ‘the public’ imagines itself (Hogan, *et al*, 2020).

While interpretive futures offer insights and opportunities that begin to critique and signal alternatives to the foreclosures of capitalist realism, the embrace of a critical futures orientation promises a distancing from any and all imagined futures through an effort to understand the forces that produce particular individual and collective investments in any one vision of the future. For example, the pervasiveness of neoliberal policy imaginaries that see education through the lens of human capital development would be taken up in a critical futures orientation as an opportunity to understand how particular policy mobilizations such as standardized testing and the need for comparative competitive global bench-marking become dominant over other policy options.

The *critical futures* orientation draws on a wide range of analytical tools including poststructuralism, seeking to “make the universal particular, to show that it (the present) has come about for fragile political reasons, merely the victory of one discourse over another, not a Platonic universal” (Inayatullah, 2013: 45). From this perspective, education policy actors often appear caught within the circular logics of education as something that can reform itself through “habitual attempts to improve upon its failed memories of a glorious future”

(Webb, Sellar, Gulson, 2019: 10). Rather than the “exhaustive pragmatics” of episodic negotiation with and mitigation of neoliberal policy initiatives, teacher organizations, in sustained collaboration with critical academic partners, could draw on this orientation to develop a deeper nuanced understanding of “future-making”. These efforts can be useful informed by examination of “the interactions between three notable human preoccupations that shape the future as a cultural fact ... imagination, anticipation and aspiration (Appadurai, 2013: 286).

As Frederic Jameson (2003: 76) has famously suggested, “it is easier to imagine an end to the world than an end to capitalism”. However, possibilities for counter-narratives can be generated from a “critical realism” (Goode & Godhe, 2017) that attends to how futures are shaped by forces “beyond the realm of human action ... [including], for example, unintended ecological consequences of well-intentioned ‘green’ policies that, independent of human will, may end up shaping our future in unforeseen ways (2017: 156). This perspective offers new ways to reimagine the constructs of time and ‘the public’ by deconstructing how agency is defined and mobilized at a moment in which we are confronted by the end of human exceptionalism (Goode & Gode, 2017; Melnikovas, 2020). The critical futures orientation offers tools to begin democratizing the future by asking: Who and what counts as a subject? What is meant by ‘community’ and ‘the public’? And who does *your* future think / am (Godet, 1987)?

A participatory futures approach mobilizes questions that invite producing alternatives to the legacy of knowledge production and governance that has focused on managing risk and uncertainty rather than an ethics of possibility and hope (Appadurai, 2013). This can involve a “prefigurative politics” that attends to the emergence of what is mobilized and activated in ‘the now’ through social movements (Gebhard, 2019: 183). For young people “who have the most to lose in the Anthropocene (and) had the least to do with its creation” (Braje 2015: 381) social movements that activate novel encounters such as the ‘Friday for Future’ climate change initiative, also point to the limitations of representative democracy and conventional thinking about leadership. Social movements such as the Indignados, Occupy and Black Lives Matter can break the causal chain between means and ends since politics should continually seek ways to open new possibilities and horizons (Arendt 1958: 223; Ferriolo, 2020).

The core challenge for teacher organizations is not to abandon research efforts tied to predictive futures, but to build capacity that produces new possibilities for renewal by mobilizing members’ imaginaries beyond *what is* to *what might be*. As teacher organizations move from predictive and interpretive to critical and participatory futures thinking, this can also lead to questioning the “quasi-religious belief in leadership [that] all too often offers a Disneyland vision of organizations” and what determines their success in achieving ‘strategic’ goals (Alvesson and Spicer 2016: 125). Here it is helpful to consider the etymology of the word ‘strategy’, which derives from the Greek *strategus* or general, who can see far to assess the field of action and develop a plan to be executed by the followers (Hardt and Negri, 2017: 15). Using action learning to explore critical and participatory futures, teacher organizations can break from a focus on short-term ‘quick-wins’ fixed on “chronological anticipations” that serve only to “flatten and reduce the number of educational futures that can be anticipated” (Webb, Sellar, & Gulson, 2019: 5). This is exemplified in the ongoing commitment of Education International to “educate for democracy” while engaging with multiple material challenges for teachers globally (Hopgood & van Leeuwen, 2019). This work involves initiatives that flow along the interpretive, critical and participatory orientations to futures thinking. Complimenting these participatory futures-making efforts are forward-thinking exchanges among researchers and teacher organizations, including Education International, to engage in a dialogue around the aims of education amidst major global changes (Education International, 2020; Macbeath, Galton, & Bangs 2020). This work is of course taken-up in a multitude of ways by its 384-member organisations. As one of many examples, the Queensland Teachers Union (QTU) (2020), working in consort with other Australian unions and researchers, has for many years mobilized its strategic plan to counter the

privatization and commercialization of education while advocating for the end of NAPLAN, Australia’s national testing program. Of course, the QTU’s efforts parallel similar initiatives taken up by teacher unions globally on these and other fronts including a broad spectrum of social justice issues.

When mapping various activities related to the four futures orientations, it is also useful to consider five dimensions of the Futures Consciousness Scale: time, agency beliefs, openness to alternatives, system perspective and concern for others (Minkkinen, 2019). These five dimensions, developed by the Finland Futures Centre, represent constructs that attempt to capture the key psychological attributes of individuals and organizations as they engage and mobilize futures thinking to effect change (Ahvenharju *et al* 2018). Figure 1 describes the intersections between the five dimensions of futures consciousness and the four futures orientations. Each cell provides a brief descriptive note with an accompanying illustrative example that follows in *italics*. It is also important to note that these examples, drawn from a scan of the literature, are illustrative only and are drawn from a number of organizations across both the Global North and South.

Figure 1. Uses of the future by teacher organizations: possibilities for resistance, rapprochement and renewal.

	Predictive	Interpretive	Critical	Participatory Futures
Time (conceptions of time, cause and effect and consequences in a VACU world)	Concern with the linear passage of time; building on previous milestones and achieving future targets. <i>Annual planning and priority identification tied to annual budget cycles and/or government initiatives.</i>	A fragile present where cyclical and/or non-western understandings of past, present and future co-exist. <i>Design Labs to generate futures rather than responding to pre-determined ‘powerful futures.’</i>	Disruptive questioning of causality and categories of past/present/future. <i>Recognition of complexity and ‘feral futures’ in shaping organization’s capacity for anticipatory governance.</i>	Spiral multi-year engagements that produce multiple, co-created, preferred futures. <i>Investing in the spontaneity and ebb and flow of social movements (e.g. collaborative networks outside of organizational boundaries).</i>
Agency beliefs (assumptions about capacity to engage with the Global Education Narrative and influence the future through anticipatory governance)	Prediction and control focussed on persuasion and deploying expertise to influence policy actors. <i>Strategy developed primarily by elected representatives and senior officials to be sanctioned by voting and assemblies.</i>	Mobilization of networks in pursuit of democratic reform and social justice. <i>Member awareness campaigns regarding social justice and indigeneity.</i>	Questioning of ‘cruel optimism’ in the face of the intensification of capitalist realism and impending environmental collapse. <i>Pursuing structural change in response to growing economic disparity globally/locally and precarity.</i>	Action learning through iterative engagement with local school-communities through ‘cosmopolitics’. <i>Strategy developed by active experimentation of members organized in social movements with others (i.e. arts and multi-media as to produce futures).</i>
Openness to alternatives (ability to question assumptions and accept uncertainties)	‘Exhaustive pragmatics’ and use of evidence to mitigate impacts of capitalist realism. <i>Advocacy campaigns that sustain the promise of ‘education re-forming itself.’</i>	Engaging diverse visions and multiple ‘past futures’ to rethink ‘powerful futures’ (i.e. mobilizing indigenous knowledges). <i>Social justice advocacy and solidarity with NGOs.</i>	Critical realism as an alternative to capitalist realism by ‘mobilizing imagination, anticipation and aspiration’ through ‘futures-making’ research. <i>Addressing the problem of human exceptionalism on a damaged planet.</i>	Reliance on co-creation of strategies through localized member mobilizations and networks. <i>Democratizing futures through community and students leading change in the intersectionalities of social justice and environmentalism.</i>
Systems perception (recognition of the interconnectedness of the human and natural systems and precarity)	Forecasting through scenarios and scanning to rationalize decisions.	Seeking insights and uncertainty by crossing boundaries.	Reshaping and redefining the relations of knowledge production.	Boundary-crossing participatory futures collaborations (i.e. social justice, emergence of AI).

driven by climate change, growing inequalities and social justice issues)	<i>Engaging with ‘the Capital’ and key policy actors (‘influentials’) representing neo-liberal reform agendas.</i>	<i>Episodic collaborations with like-minded unions, advocacy groups and researchers.</i>	<i>Challenging universalism and the commercialization and intensification of capitalist realism.</i>	<i>Sustained partnering with community groups rather than ‘the Capital’.</i>
Concern for others (ethical encounters addressing systemic structural injustices intersectionality of class, gender, identity).	Persuasion and lobbying on priorities established through member consensus. <i>Episodic tactical collaboration with like-minded groups to influence government.</i>	Commitment to identity, social justice and equity. <i>Advocacy and campaigns with marginalized groups.</i>	Engaging structural forces driving marginalization of the profession. <i>International democratic and human rights reform campaigns.</i>	Community driven ‘future-forming’ action research. <i>Resources committed to building sustained relationships and partnerships outside the organization’s institutional boundaries.</i>

Democratizing futures: the promises of the present moment

As Figure 1 illustrates, moving out of the predictive futures orientation opens multiple possibilities for teacher organizations to mobilize “futures-making” research while attending to the immediate necessities of protecting members’ interests. Describing the many ways in which teacher organizations are already pursuing this shift of focus is beyond the scope of this working paper. However, international collaboration in sharing successes in this work has been undertaken in previous partnership summits in Sydney, Australia (March, 2019) and Manchester, England (November, 2019), and work remains to be done to sustain these nascent efforts (Education Futures Partnership, 2020). The Union of Education Norway case studies that follow provide two detailed examples of how teacher organizations can navigate the various orientations to “futures-making” research supported by sustained partnerships with academia.

Shifts in the futures orientation of teacher organizations towards “futures-making” research can be supported by engaging with academia in new forms of knowledge production. Previous efforts by academics acting as “critical friends” to support teacher organizations to catalyze community mobilization based on the research on social movements have been successful (Compton & Weiner, 2008: 928). These collaborations also have benefits for academics given the current challenges that the higher education sector faces globally. Since the 1990s, academic research in universities has been transformed by marketization and audit cultures (Shore & Wright, 2003; Spooner & McNinch, 2018). Many universities have introduced internal research assessments in an effort to quantify performance and drive improvements. A significant collateral impact of this trend is the growing precarity of early career academics as they face unsustainable working conditions and competition for scarce funding and employment (Iddeng & Norgård, 2019). Many governments have also introduced national performance-based research assessments and there has been a shift towards focusing national research policies on thematic areas to produce research evidence to inform public policy. Competition for external funding has intensified and it is often tied to research priorities that address a limited set of public policy concerns. These developments interact in ways that narrow the types of academic research that can be sustained in universities (Pritchard *et al.* 2019). Governments and other organisations (e.g. influential philanthropic organisations) now play a significant role in setting agendas for academic research. The new modes of accountabilities that have narrowed academic research have also had a negative effect on teacher unions because the need to respond to performance measures, comparisons and rankings reduces time and resources for developing strategic foresight capacity.

Performance-based research assessments are, however, also increasingly focusing on impact, and this agenda creates spaces for research ‘users’ to shape research agendas. Audit cultures and performance-based research assessments encourage an ‘inward looking’ approach to research, and impact policies have been introduced in an effort to counter this trend. This development holds important possibilities for critical educational research. The social and spatial segregation of universities “renders the interaction between critical thinkers and political and social movements ... less likely” (Keucheyan, 2013: 255). In this context, critical education researchers stand to benefit from collaborations with teacher organizations because they are a significant voice in the education policy landscape and have the potential to set research agendas that emerge from, and have the support of, the profession and the communities it serves. Engaging with teacher organizations in futures-making work creates possibilities for research collaborations driven by a different set of imperatives that go beyond the evidence-based policy approaches that focus on solving problems as they are currently formulated. Rather than describing these possibilities in detail, the following sections offer a synopsis of work already underway and other emergent initiatives.

Two cases of co-creating futures: the Union of Education Norway

The following two case studies of the Union of Education Norway (UEN) illustrate some of the dynamics associated with going beyond the predictive futures orientation. The cases illustrate efforts of the UEN to navigate the multiple tensions teacher organizations face as they attempt to shift from the ‘exhaustive pragmatics’ of responding to the dominant neoliberal positioning of the profession as an object of reform in order to become co-creators of educational futures. The first case finds the union repositioning itself as a producer of knowledge about teaching and learning by creating a new narrative about the capacity of the organization and member engagement. The second case involves a three-year international partnership with schools and researchers in a boundary-crossing project focussed on rethinking how success in mathematics might be reconstituted. This partnership began in the predictive futures space, shifting to interpretive and critical futures as an example of “futures-making” research.

Co-creating a research strategy through foresight

Norwegians in general tend to be members of several civil society organisations, and a majority of employees are unionized although the percentage has fallen in the private sector (Aarhus University, 2020). A large majority of Norwegian teachers, both in the basic and tertiary sectors, are committed to solidarity and have been unionized for over a century (Koçer, 2018). As in many other European countries, teachers have been organised across many different affiliations based on gender, teacher education institution and the type of institution where they are employed. The unification of Norwegian teachers culminated in 2001 with the foundation of the Union of Education Norway (UEN). The union of predominantly primary and early childhood teachers was merged with predominantly secondary teachers accompanied by high aspirations for the union’s ability to lead and strengthen the role of the union in educational development and to lift the status of the profession. One of the first bold steps to demonstrate that the union, now representing 180,000 members (including approximately 90% of the country’s certified teachers and leaders), could speak on behalf of the teaching profession was the development of a platform of professional ethics. This work would involve examining and reflecting upon how the profession saw itself and was seen by the public and government. This reflexive questioning of *who were we* and *who do we want to become* was an important shift towards an interpretive and critical futures orientation for the UEN. This was an aspirational moment of creative possibility in which the union imagined possibilities for

advocacy beyond its organizational boundaries and the conventional pragmatic preoccupation with bargaining and working conditions.

The foundation of the UEN coincided with a political shift in government in 2001 when a high-profile conservative education minister took office. One of her first efforts was to publish a pamphlet of references to different international and national education research reports that supported her political program, which was to balance a decentralisation of decisions with central accountability. Norway provides one example of how, “in [n]eo-Weberian states, external evaluations and new accountability instruments in education were not initially chosen to promote market competition, but as a way for the central State to guarantee quality standards in a context of highly decentralized education systems” (Verger, Fontdevila & Parcerisa 2019). The Ministry developed much closer relations with the OECD and since then Norway, almost more than any other country, participated in almost all OECD benchmarking activities and surveys in education. Norway also drew on the expertise of the OECD to oversee and evaluate different reforms that are implemented in Norwegian education. The latest example was the introduction of a new system for decentralised Continuous Professional Development (CPD) for teachers mobilized by the Strategy for Competence Development (2005–8), leading to much frustration among teachers (Lloyd and Payne 2012; Ure, 2012). This evolving alignment with the OECD was an example of the growth of the global ‘epistocracy’ in education and efforts to intensify the accountability architectures of governance (Lillejord, 2020).

The UEN’s first reaction to the new minister’s pamphlet on educational research was to develop its own publication on the same issue, *Additional Sources of Knowledge* (Flere kilder til kunnskap) (Union of Education Norway, 2003), showing how the Minister’s version, *School knows best*, (Ministry of Education, 2003) was a case of selectively choosing and interpreting research that could substantiate her political program. This first experience with the new minister led the union to realise that it required more research capacity and that it needed to build a closer relationship with the educational research community. However, when the union initiated a Scientific Forum in 2004 it was evident that this episodic effort was more to satisfy the union’s needs for research-informed advice on short term policy issues in education, rather than an intentional effort to build a long-term sustained working relationship with the research community. Lost was an opportunity to mobilize the UEN’s value proposition that education should address the fundamental global challenges of humanity through education.

This is also a background for the effort to develop UEN’s research strategy, *Research for practise and profession – The Education Association’s Research Policy* (Union of Education Norway, 2013), which was comprised of three parts: (1) knowledge-based professional practices; (2) prioritised research questions for the period 2012-2020; and (3) conditions of research. Based on the Education Association’s “[v]alues and principles”, the document recognizes the need for “a dialogue between researchers and professional practitioners” while underscoring that “the profession must take responsibility for recognizing and using results from such work.” These parallel commitments position the profession as accountable for its aspirations for knowledge production and governance. Another challenge was that one of the key drivers for the work was the recognition of the considerable historic divide between the educational research community and the teaching profession. The consequence of this divide is that the profession in many ways has relied on non-systematised experience-based knowledge, while much of the educational research community is preoccupied with governance and policy issues with little relevance for the more granular challenges in the classroom (Amundsen, 2015).

In 2015, the UEN also developed a web page to provide members and the general public with access to educational research which was systematised and covered a wide range of relevant subjects. Importantly, this page is now the country’s most visited web page about educational research. This work with educational research, and the fact that that the UEN is not affiliated to any political party or movement, made it possible to

develop a strategy called “the expert in the middle”, through which the UEN gradually became more accepted in the political community as a non-partisan knowledge base that the political parties from left to right took more seriously. The former Minister of Education from 2001, now CEO of the conservative think-tank, *Civita*, lamented that “[t]oo many (political) parties [in Parliament] are developing education policy on behalf of UEN – rather than on behalf of children and parents” (Clemet, 2018, our translation).

Rather than a singular focus on predictive futures, the UEN’s efforts to build its research and foresight capacity illustrated the need to reimagine and rebuild relationships with both its members, the research community and the government. The union’s long-term work to lift teacher education to a master’s degree level which was achieved in 2017 can be understood to be part of the same effort to enhance the profession’s capacity to relate to research and the research community. This work involved a shift to interpretive and critical futures through a reflexive and critical assessment of the organization’s conventional preoccupation with bargaining and working conditions. The efforts of the UEN to develop a more strategic approach to research involved a long-term commitment to rethinking and repositioning its capacity for knowledge production through publication of its research strategy paper and efforts in working with new partners. In this way, the processes of rapprochement and renewal (Carter et al, 2010) were given more attention and energy, rather than simply mobilizing oppositional resistance to reforms. The resulting shift in governance for the UEN required mobilizing the combination of research- and experienced-based competence and humanitarian values that underpin the UEN’s commitments to quality education as a public good for all.

Restor(y)ing the Global Education Narrative

Two of the prioritised areas of the UEN Research strategy were *Democracy* and *Formation (Bildung)* and *Subjects, subject areas and learning processes*. On the basis of these aims and following a year-long set of negotiations, the Norway-Canada Partnership (NORCAN) project was launched in Banff, Alberta, on March 13-14, 2015. NORCAN was a joint action research effort by the Alberta Teachers’ Association (ATA), the Ontario Teachers’ Federation (OTF) and UEN, with the Ministry of Education in Ontario.

As NORCAN unfolded, the shift from a predictive futures concern for pragmatic educational development quickly shifted to open spaces and possibilities where interpretive and critical orientations emerged.

Two unique distinguishing features were initially noted by one of the researchers evaluating the partnership: the creation of “a new network of schools committed to improving the teaching and learning of mathematics through a commitment to equity” and “a commitment to an independent external evaluation of the project” (Shirley, 2019: 4). In this regard, Mona Røsseland, PhD candidate and didactician in mathematics at the University of Agder, provided expert advice regarding the pedagogical questions related to mathematics instruction in the Norwegian context (Røsseland, 2019). Meanwhile, Professor Dennis Shirley at Boston College served as an external researcher for the project, focussing on the broader educational change processes related to the nine schools in the network. This shift toward building a sustained relationship with academia was a critical commitment made by the leadership of the UEN. For both the Ontario Teachers’ Federation and the Alberta Teachers’ Federation, NORCAN stood as an exemplar of sustained collaboration with academia and was the focus of joint conference presentations and efforts to be more strategic in advocating for educational development.

Another significant shift for the UEN, in terms of its agency and relationship to schools and the broader education system, flowed from the interactions between the students, teachers and school leaders as they wrestled with the role mathematics played in the lives of their schools. The theory of change adopted for the partnership (Booz & Company, 2012), developed with Pasi Sahlberg, calls for networks of teacher, principal and

student leaders to engage in three transformational strategies: *thinking ahead*, *delivering within* and *leading across*. This theory of change was first employed in an international network the Alberta Teachers' Association developed with Finland (FINAL) and which proved to be highly successful with the involvement of students, not as by-standers or enclosed as a flattened unified 'voice', but as co-creators in leading change (Stiles, 2019).

Over three years of working in nine schools, the students' ability to express how different forms of teaching impacted their learning developed slowly, but steadily led to the students being able to take part in the discussions with teachers and school leaders as equals. This fostered a much closer relationship between the 80 students and their peers, and the students started to express a new understanding for the role of teachers and leaders. As well, students became more aware of what kind of work helped the progression of their own learning. Drawing on the work of philosopher Gilles Deleuze, the lead Alberta principal captured the impact of the student involvement by referring to the "shock to thought" (Stiles, 2019: 71) they consistently produced with their questions about the assumptions teachers and school leaders held about the experience of school. For example, whether they be Norwegian or Canadian, students questioned the pace of the school day, the focus on testing and comparing, and the fragmentation they felt when mathematics was often seen as a gate-keeper to advancement after school. Meanwhile, the issues they were facing in their own lives, as well as broader global challenges, tended to be constantly deferred (Stiles, 2019; Shirley, 2019).

For the UEN, this international network of schools committed to action learning offered a number of rather bold purposes and provocations. One was to gain experience in relating to the education research community in new ways by contracting and involving a researcher in a project the unions had designed. Another was to explore whether the union could take the initiative to improve professional practise and whether this role could be accepted and embraced both by its members and representatives, and by education authorities. A third was to see what would happen if the network involved young students (14 – 18 years) in a project about mathematics didactics that pursued the question of how to teach mathematics well. Of course, many of these initial assumptions would come to be challenged.

From the beginning, the focus on mathematics was understood by the partners as a pragmatic move in order to address the growing pressures felt by both the teacher organizations and governments regarding performance on ILSAs such as PISA (Stiles, 2019: 100-101). The rationale for participating in NORCAN spoke to the recognition by the senior leadership of the union that given the growth in data infrastructures and audit cultures, the professional autonomy of teachers had to be protected by leading through example. This involved disrupting the narrative that the profession was unable to lead educational change and produce the knowledge needed to address the concerns regarding that country's performance in mathematics.

Yet, as the project unfolded it became increasingly evident that a constellation of forces both inside and outside schools were shaping the experiences of students. While the aspiration of NORCAN expressed the naïve and hollowed-out promise of education reforming itself (Webb, Sellar, Gulson, 2019: 10), some schools in the partnership concluded that, rather than the primary focus on mathematics as "a discrete subject representing a move from an instrumental focus on results", they required "a broader embrace of the existential imperative" to examine the broader purposes of school (Shirley, 2019: 24). In reviewing the shift that took place from a focus on individual student learning and impulses toward 'learnification' (Biesta, 2013), Dennis Shirley underscored how NORCAN evolved to reflect and enact the "spirit of the Delors Report, (1996: 22) and the four pillars of learning: to know, to be, to do and live together (Shirley, 2019: 24-25).

For the UEN, the NORCAN experience illustrates the pervasive impact and legacy of neoliberal reforms and top-down managerial cultures where changes were typically initiated by national or local authorities, often in cooperation with researchers. For example, while the partners saw promise in the focus of participatory action

research that informed the design of NORCAN, the challenges teachers encountered in critically reflecting on their practice was made evident by their desire for the university researcher to continually work with them (Norwegian Union of Education, 2019: 48). Importantly, these challenges were not limited to the Norwegian schools. There were other examples from the Canadian schools where thinking about teaching remained entrenched and participants remained committed to searching for “magic bullets” or linear solutions to school improvement (Stiles, 2019: 6). Through the cyclical iterative school engagements over the three years of NORCAN, the work shifted from the instrumentality of a predictive futures approach of “adapting so-called ‘innovative’ practices to instead concentrating on the relational work of building cultures where risk-taking and building confidence become a shared goal for all” (Shirley, 2019: 31).

Although the NORCAN project was successful in many respects, it illustrated for the UEN how difficult and costly it is for a teachers’ union to take responsibility on its own for research-based improvement of the professional work in schools. Building the capacity for a teacher organization, with critical friends from academia, to gain better control over the development of its own knowledge base and competence development, requires a sustained commitment of not only financial resources, but also an appreciation for the challenges faced by academic colleagues. While the amount of education research in Norway has increased considerably during the last 20-30 years, the main bulk of this work is financed by local and central governments and reflects their imaginings of what educational development for the future should look like. The commitment of the UEN to sustain a relationship with Mona Røsseland in NORCAN over the life of the partnership represented one small but important step towards imagining new futures both for mathematics and teaching and learning in general in Norwegian schools. The NORCAN project also begs the question of whether a sustainable and lasting relationship between teacher unions and academia should be built on organisational cooperation with higher education unions, in addition to cooperation with individual researchers or research institutions.

Education 2050 and a profession *Learning to become*

Futures studies needs the teaching profession and its organizations need futures thinking. We propose that the framing of collaborations between teacher organizations and academia should shift from a focus on *what is* to creating *what is to become* (Gergen, 2015: 294). The two cases of the UEN shifting its futures orientations, supported by collaboration with academic researchers, represent examples of active experimentation for productive futures. This is co-creation in the spirit of exploring what the philosopher and biologist Stuart Kauffman (1996) called “the adjacent possible” – the “edge” of complexity where life is sustainable - below and above this point, life becomes untenable. In practical terms, working in the adjacent possible involves assurances that while the industrial union focus on ‘service-to-members’ is attended to, a sustained commitment to the critical and participatory futures orientations is both possible and necessary. Given the global pandemic that has amplified many of the forces contributing to the precarity of public education, the teaching profession must not only continue to renew its organizations, but also join with the communities it serves to democratize their multiple futures by engaging with the question of what kind of futures do we want and why? By working strategically with forward-thinking critical researchers, teacher organizations can disrupt organizational imperatives to focus on ‘exhaustive pragmatics’ to ensure this question will be answered not with one voice, but with a chorus of voices in communities globally committed to *care* and *solidarity*.

There are many other examples of the types of collaboration described in this paper. In the US, the National Education Association’s Great Public Schools Fund program provides for significant investments (up to \$250K/year for three years) by the union in innovative projects that are generated by state and/or local affiliates

– at times in partnership with academics as evaluators or consultants. In the English school system, the National Union of Teachers (NUT), now merged into the National Education Union, has had a long history of combining trade union struggle with advocacy of educational and social justice ideals. In recent years, a network of over 100 predominantly university-based researchers (*Reclaiming Schools*) has worked with the union to strengthen capacity to provide a future-oriented and strongly theorised underpinning to public campaigns. A primary aim has been to make reliable research accessible to teachers through print publications, a blog and social media (www.reclaimingschools.org).

Currently, efforts are underway to support the formation of a collaborative research network, the Education Futures Partnership (EFP), representing unions and researchers committed to a strategic focus on the future of ILSAs and other initiatives. A key element of follow-up work of the EFP will be to broaden the base of the network to include the role of PISA in leveraging the commercialization and datafication of public education in the Global South (<https://education-futures-partnership.education/>). Also underway is the piloting of graduate courses focussed on the global futures of education that could become the basis for a graduate level strategic foresight certificate/degree program, particularly as a professional development offer for teacher unions. These courses take up a transdisciplinary approach to futures thinking including the use of the foresight tools developed by the Futures Literacy Lab, modelled at the Global Futures Literacy Design Forum in Paris (UNESCO, 2019b).

These efforts by teacher organizations to productively engage and co-create multiple futures require substantial resources these could be supported by collaborations with academia that lead to funding for co-designed research projects. The tectonic global shifts caused by the pandemic will also push teacher organizations to change practices in ways that could increase resources for this strategic work. For example, given the growing concerns regarding the environmental impact of air travel, there are opportunities to reconsider the considerable expenditures to facilitate attendance at national and international meetings and conferences. The pandemic provides a timely opportunity to explore new modes of networking and collaboration. Numerous academic conferences have also been cancelled and academic societies are recognising that “whether we are ready for it or not we are forced to rethink our usual academic engagements and interrogate our prevailing academic and professional infrastructures, communication processes and movement patterns while envisioning our work differently” (Silova, 2020).

We argue that collaborative, participatory futures-making should be prioritised as both the academic community and teacher organizations begin to envision their work differently. The promise of the present moment is for teacher organizations and academia to share in co-creating responses to the slow cancellation of the future (Beradi, 2011). The profession and academia need to take up the challenge invoked by Arendt, that “education is where we decide whether we love our children enough not to expel them from our world and leave them to their own devices, not to strike from their hands their chance of undertaking something new, something unforeseen by us, but to prepare them in advance for the task of renewing a common world” (1993: 180).

References

- Addey, C. and Verger, A. 2020. *An attempt at the first ‘Davos of Education’: Dissonances in the OECD-Forum for World Education on The Future of Education*. *Education International*.
<https://www.unite4education.org/global-response/an-attempt-at-the-first-davos-of-education-dissonances-in-the-oecd-forum-for-world-education-on-the-future-of-education/> (Accessed 11 August 2020.)

- Ahvenharju, S., Minkkinen, M., and Lalot, F. 2018. The five dimensions of futures consciousness, *Futures*, Vol. 104, pp. 1-13.
- Alvesson, M., & Spicer, A. 2016. *The stupidity paradox*. London, Profile Books.
- Amundsen, B. 2015. *Education researcher points the way to good schools*. Science Norway. <https://sciencenorway.no/children-and-adolescents-forskningno-norway/education-researcher-points-the-way-to-good-schools/1417508> (Accessed 11 August 2020.)
- Andreotti, V. 2011. *Actionable postcolonial theory in education*. Springer.
- Appadurai, A. 2013. *The Future as a Cultural Fact: Essays on the Global Condition*. London, Verso.
- Appadurai, A. 2020. *Gradual learning, the urgency of knowledge and the connectivity of humanity*. UNESCO Futures of Education Ideas LAB. <https://en.unesco.org/futuresofeducation/appadurai-gradual-learning-urgency-knowledge> (Accessed 11 August 2020.)
- Arendt, H. 1993. *Between past and future*. New York, Penguin Books.
- [Avishaj](#), B. 2020. *The Pandemic Isn't a Black Swan but a Portent of a More Fragile Global System*. The New Yorker. <https://www.newyorker.com/news/daily-comment/the-pandemic-isnt-a-black-swan-but-a-portent-of-a-more-fragile-global-system> (Accessed 11 August 2020.)
- Auld, E. and Morris, P. 2019. Science by streetlight and the OECD's measure of global competence: A new yardstick for internationalization. *Policy Futures in Education*, Vol. 17, No. 6, pp. 677-698.
- Bascia, N. and Osmond, P. 2012. *Teacher unions and educational reform: A research review*. Washington, DC, National Education Association.
- Bascia, N. and Osmond-Johnson, P. 2017. *Teacher Unions and Educational Reform: A Research Review*. Washington, National Education Association.
- Bascia, N. and Stevenson, H. 2017. *Organising teaching: Developing the power of the profession*. Brussels, Education International Research Institute.
- Baudemann, K. 2016. Indigenous Futurisms in North American Indigenous Art - The Transforming Visions of Ryan Singer, Daniel McCoy, Topaz Jones, Marla Allison, and Debra Yepa-Pappan. *Extrapolations*, Vol. 57, No. 1-2, pp. 117-156.
- Beradi, F. 2011. *After the Future*. London, AK Books.
- Berlant, L. 2010. *Cruel Optimism*. Durham, NC: Duke University Press.
- Biesta, G. J. 2013. *The beautiful risk of education*. Boulder, CO., Paradigm.
- Biesta, G. 2019. *Obstinate Education: reconnecting school and society*. Leiden, Netherlands, Brill-Sense. Booz, X. and Company, X. 2012, May. *Transformational leadership in education: Three imperatives for lasting change*. Paper presented at the Transforming Education Summit, Abu Dhabi.
- Braidotti, R. 2019. *Posthuman Knowledge*. Cambridge, Polity.
- Brown, W. 2017. *Undoing the demos: Neoliberalism's stealth revolution*. New York, Zone Books.
- Braje, T. J. 2015. Earth systems, human agency, and the Anthropocene: Planet earth in the human age. *Journal of Archaeological Research*, Vol. 23, No. 4, pp. 369–396.
- Bratton, B. 2020. *18 Lessons of Quarantine Urbanism*. Strelka Mag. <https://strelkamag.com/en/article/18-lessons-from-quarantine-urbanism> (Accessed 11 August 2020.)
- British Columbia Teachers' Federation. 2019. *Navigating transformation: Education 2030, teachers' unions, and spaces of resistance*. Vancouver, BCTF Research.

- Bussey, M. 2019. Anticipatory Aesthetics: The Senses and the Body in Anticipatory Theory and Practice. R. Poli (ed.), *Handbook of Anticipation*. Springer Nature Switzerland. pp. 861-874.
- Candy S. and Potter, C. 2019. *Design and Futures*. Taipei: Tamkang University Press.
- Carter, B., Stevenson, H., and Passy, R. 2010. *Industrial Relations in Education: Transforming the School Workforce*. New York, Routledge.
- Chandir, H. 2018, December. *Assessing Global Competence in PISA*. Paper presented at the Australian Association for Research in Education Annual Conference, Sydney.
- Clemet, Kirstin. 2018. Too many parties are developing education policies in behalf of UEN. <https://clemet.blogg.no/page/8> October 25. (Accessed 10 March 2020).
- Compton, M. and Weiner, L. 2008. The Global Assault on Teaching, Teachers, and Teacher Unions. Compton, M. & Weiner, L. (eds.). *The Global Assault on Teaching, Teachers, and Their Unions: Stories for Resistance*. New York, Palgrave Macmillan, pp. 3-10.
- Couture JC. 2015. Crossing Boundaries to Support Strategic Foresight. Bascia N. (ed.), *Teacher Unions in Public Education*. Palgrave Macmillan, New York, pp 155-168.
- Davidsson, J.B. and Emmenegger, P. 2013. Defending the organisation, not the members: Unions and the reform of job security legislation in Western Europe. *European Journal of Political Research*. Vol. 52, No. 3, pp. 339-363.
- Dawson, Ross. 2020. *University Foresight Programs*. <https://rossdawson.com/futurist/university-foresight-programs/> (Accessed 11 August 2020.)
- Delors, J. 1996. *Learning: The treasure within*. Paris, UNESCO.
- Dillon, G. L. 2016. Introduction: Indigenous futurisms, Bimaashi Biidaas Mose, Flying and Walking towards You.
- Duncheon, J. C., and Tierney, W. G. 2013. Changing conceptions of time: Implications for educational research and practice. *Review of Educational Research*. Vol. 83, No. 2, pp. 236- 272.
- Education International. 2020. *Education International Guidance on Reopening Schools and Education Institutions*. <https://www.ei-ie.org/en/detail/16760/education-international-guidance-on-reopening-schools-and-education-institutions> (Accessed 11 August 2020.)
- Engel, L.C.; Rutkowski, D. and Thompson, G. 2019. Toward an international measure of global competence? A critical look at the PISA 2018 framework, *Globalisation, Societies and Education*, Vol.17, No. 2, pp. 117-131.
- Evers, J. 2019. *Teachers of all countries unite!* <http://mrkolbersteaching.blogspot.com/2019/02/jelmer-evers-teachers-of-all-countries.html?m=1> (Accessed 11 August 2020.)
- Ferriolo, K. 2020. *We Must Write A Better Ending Using Strategic Foresight in Social Movement Organizing*. Master's Thesis, Ontario College of Arts and Design, Canada.
- Fink, D. 2017. Leading Futures – Unions: The Last Bastions of Progressive School Improvement. Harris, A. (ed), *Leading Futures Series*. <https://internationalednews.com/2017/06/01/leading-futures-unions-the-last-bastions-of-progressive-school-improvement/> (Accessed 11 August 2020.)
- Fisher, M. 2009. *Capitalist Realism. Is There No Alternative?* Winchester, Zero Books.
- Fisher, M. 2015. *Ghosts of My Life – Writings on Depression, Hauntology and Depression*. Winchester, Zero Books.
- Fricke, S. 2019. *Introduction: Indigenous futurisms in the hyperpresent now*. *World Art*, Vol. 9, No. 2, pp. 107-121.

- Fuerth, L. S. and Faber, E. M. H. 2012. *Anticipatory Governance Practical Upgrades: Equipping the Executive Branch to Cope with Increasing Speed and Complexity of Major Challenges*. Washington, D.C., National Defense University Press.
- Gavin, M. 2019. *Changing conditions of work in neoliberal times - How the NSW Teachers' Federation has responded to changes in teachers' industrial and professional working conditions in NSW public education, 1985-2017*. PhD thesis, University of Sydney, Australia
- Gebhardt, M. 2019. Democracy. Heike, P. (ed.), *Critical Terms in Futures Studies*. Chum, Springer pp. 79-86.
- Gergen, K. J. 2015. From mirroring to world-making: Research as future forming. *Journal for the Theory of Social Behavior*, Vol. 45, No. 3, pp. 287–310.
- Gidley, J. 2013, June. *Where to Tomorrow for Futures Studies?* Presidential address to 21st WFSF World Conference Bucharest, Romania.
https://www.academia.edu/3891825/Where_to_Tomorrow_for_Futures_Studies (Accessed 11 August 2020.)
- Goode, L. and Gode, M. 2017. Beyond capitalist realism – Why we need critical future studies. *Culture Unbound: Journal of Current Cultural Research*, Vol. 9, pp. 1–20.
- Godet, M. 1987. *Scenarios and Strategic Management*. Butterworth Scientific, London.
- Grosz, E. (ed.). 1999. *Becomings: Explorations in time, memory and futures*. Ithaca, Cornell University Press.
- Hamilton, E. C. 2017. Afrofuturism and the Technologies of Survival. *African Arts*, Vol. 50, No. 4, pp. 18–23.
- Harari, Y. 2019. Yuval Harari: *Hacking Humanity*. *Ideas*, CBC Radio. <https://www.cbc.ca/radio/ideas/yuval-harari-hacking-humanity-1.4810248> (Accessed 12 August 2020.)
- Hardt, M. and Negri, A. 2017. *Assembly*. Oxford, Oxford University Press.
- Heike, P. 2019. *Critical Terms in Futures Studies*. Chum, Springer.
- Hogan, A., Thompson, G., Mockler, N., & Johnson, R. (2020). Anxiety state: fears for the erosion of comprehensive schooling in Northern England and Alberta. *Compare: A Journal of Comparative and International Education*, 1-18.
- Hopgood, S. & van Leeuwen, F. 2019. *On Education & Democracy*. Brussels, Education International.
- Iddeng J.W. and Norgård J.D. 2019, August. *Generation Precarious – exploring the relationship between working conditions for early career researchers' and the quality of teaching and research*. Paper presented at 41st EAIR FORUM 2019, Leiden University, Belgium. <http://www.eairweb.org> (Accessed 12 August 2020.)
- Inayatullah, S. 1990. Deconstructing and Reconstructing the Future: Predictive, cultural and critical epistemologies. *Futures*, Vol. 22, pp. 115-134.
- Inayatullah, S. Choudhury, M.A. Abdul Rahman, and A-R; Naseem, O. 1998. *American Journal of Islamic Social Sciences*, Vol. 15, No. 1, pp. 1-30.
- Inayatullah, S. 2005. *Questioning the future: Methods and tools for organizational and societal transformation*. Taipei, Tamkang University.
- Inayatullah, S. 2008. Mapping Educational Futures. M Bussey, S Inayatullah and I Milojević (eds.), *Alternative Educational Futures: Pedagogies for Emergent Worlds*. Rotterdam, Sense, pp. 13–39.
- Inayatullah, S. 2013. *Futures Studies. Theories and Methods*. 36-66.
- Inayatullah, S. 2019. Futurology. Heike, P. (ed.) *Critical Terms in Futures Studies*. Chum, Springer.
- Inayatullah, S. & Black, P. 2020. Neither A Black Swan Nor A Zombie Apocalypse: The Futures Of A World With The Covid-19 Coronavirus. *Journal of Futures Studies*. March. <https://jfsdigital.org/2020/03/18/neither->

[a-black-swan-nor-a-zombie-apocalypse-the-futures-of-a-world-with-the-covid-19-coronavirus/](#) (Accessed 11 August 2020.)

- Jameson, F. 2003. Future city. *New Left Review*, Vol. 21(May–June), pp. 65–79.
- jagodzinski, j. (ed). 2017. *The Precarious Future of Education: Risk and Uncertainty in Ecology, Curriculum, Learning, and Technology*. New York, Palgrave Macmillan.
- Kauffman, S. 1996. *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity*. New York, Oxford University Press.
- Kelly, J. 2015. Trade union membership and power in comparative perspective. *The Economic and Labour Relations Review*. Vol. 26, No. 4, pp. 526-544.
- King, T. 2013. *The Inconvenient Indian: A Curious Account of Native People in North America*. Minneapolis: U of Minnesota Press.
- Koçer, R.G. 2018. Measuring the strength of trade unions and identifying the privileged groups: A two-dimensional approach and its implementation. *The Journal of Mathematical Sociology*, Vol. 42, No. 3, pp. 152-182.
- Lawrence, K. 2013. Developing Leaders in a VUCA Environment. *UNC Executive Development 2013, UNC Kenan-Flagler Business School*. <https://www.emergingrnleader.com/wp-content/uploads/2013/02/developing-leaders-in-a-vuca-environment.pdf> (Accessed 11 August 2020.)
- Levi, C. 1956. *Il Futuro Ha Un Cuore Antico*. Turin, Giulio Einaudi Editore.
- Lillejord, S. 2020. From "unintelligent" to intelligent accountability. *Journal of Educational Change* Vol. 21, pp. 1–18.
- Lloyd, C., and J. Payne. 2012. Raising the quality of vocational teachers: continuing professional development in England, Wales and Norway. *Research Papers in Education*, Vol 27, No.1, pp 1–18.
- Macbeath, J., Galton, M., & Bangs, J. 2020. *Reforming or Re-inventing Schools? Key Issues in School and System Reform*. New York, Routledge
- Macgilchrist, F. 2019. Cruel optimism in edtech: when the digital data practices of educational technology providers inadvertently hinder educational equity. *Learning, Media and Technology*, Vol. 44 No. 1, pp. 77-86.
- Matters, S. 2019. *Strategic Foresight in Métis Communities – Lessons from Indigenous Futurism*. PhD Thesis. Ontario College of Art and Design, Canada.
- Mazé, R. 2020. Politics of Designing Visions of the Future. *Journal of Futures Studies*, Vol. 23, No. 3, pp. 23–38.
- Melnikovas, A. 2020. Towards an Explicit Research Methodology: Adapting Research Onion Model for Futures Studies. *Journal of Futures Studies*, Vol. 23, No. (2), pp. 29–44.
- Miller, R. 2011. Being without existing: The futures community at a turning point? A comment on Jay Ogilvy's "facing the fold". *Foresight: The Journal of Futures Studies, Strategic Thinking and Policy*, Vol. 13, No. 4, pp. 24-34.
- Ministry of Education, Norway. 2003. The School knows best. <https://www.regjeringen.no/no/dokumenter/skolen-vet-best/id106007/> (Accessed 13 August 2020.)
- Minkinen, M. 2019. The anatomy of plausible futures in policy processes: Comparing the cases of data protection and comprehensive security. *Technological Forecasting and Social Change*. Vol. 143, pp. 172-180.
- Motti, V. 2019. Sources of Futures Studies from Foresight to Anticipation. R. Poli (ed.), *Handbook of Anticipation*. Switzerland, Springer Nature, pp. 1719-1732.

- Aarhus University. 2020. Nordics.Info. (2020). <https://nordics.info/show/artikel/trade-unions-in-the-nordic-region/>
- Pashby, K. 2012. Questions for global citizenship education in the context of the 'new imperialism': For whom, by whom? V. Andreotti, L. Mario and T. M. de Souza (eds.), *Postcolonial perspectives on global citizenship education*. London, Routledge, (pp. 21-38).
- Petrie, A. et al. 2020. *Spotlight on Quality Education for All During Covid-19 Crisis*. Paris, HundrED and OECD.
- Pritchard, R. M. O. et al. 2019. *The Three Cs of Higher Education: Competition, Collaboration and Complementarity*. Budapest: Central European University Press.
- Queensland Teachers' Union. 2020. Strategy, mission, values and objectives – 2019 to 2023. https://www.qtu.asn.au/application/files/9115/8390/5895/Mission_values_strategic_objectives_Feb2020.pdf (Accessed 12 August 2020)
- Ramírez, R., and J. Ravetz. 2011. Feral futures: Zen and aesthetics. *Futures*, Vol.43 pp. 478–487.
- Ramos, J. 2017. Linking Foresight and Action: Toward a Futures Action Research. Editor (ed.), *The Palgrave Handbook of Action research*. New York: Palgrave MacMillan, (pp. 823-842).
- Ravetz, J. 2002. Dealing with uncertainty in numbers. Unpublished manuscript. <http://www.nusap.net/download.php?op1/4getit&lid1/413> (Accessed 11 August 2020.)
- Røsselund, M. 2019. *The Norway-Canada (NORCAN) Research Partnership – prosjektbeskrivelse*. Oslo, Union of Education Norway. <https://www.utdanningsforbundet.no/larerhverdagen/forskning-for-praksis-og-profesjon/the-norway-canada-norcan-research-partnership/> (Accessed 11 August 2020.)
- Silova, I. 2020. *Welcome message from CIES President Elect*. Comparative and International Education Society. <https://vimeo.com/399713670>. (Accessed 11 August 2020.)
- Shirley, D. 2019. *The Untapped Power of International Partnerships for Educational Change: The Norway Canada Project (NORCAN)*. <https://www.utdanningsforbundet.no/var-politikk/kunnskapsgrunnlag/publikasjoner/2019/the-untapped-power-of-international-partnerships-for-educational-change-the-norway-canada-project-norcan/> (Accessed 11 August 2020.)
- Shore, C., and Wright, S. 2003. Coercive accountability: the rise of audit culture in higher education. M. Strathern (ed.), *Audit cultures: Anthropological studies in accountability, ethics and the academy*. London and New York, Routledge, pp. 57-89.
- Slaughter, R. 2020. Futures Studies as a Quest for Meaning. *World Futures Review 2020*, Vol. 12, No. 1, pp. 26–39.
- Sorensen, T.B. 2020. The space for challenge in transnational education governance: the case of Education International and the OECD TALIS programme. *Discourse: Studies in the Cultural Politics of Education*. <https://doi.org/10.1080/01596306.2020.1718611>
- Spooner, M., & McNinch, J. (Eds.) 2018. *Dissident Knowledge in Higher Education*. Regina: University of Regina Press.
- Stengers, I. 2019. *Another Science is Possible*. Cambridge, Polity.
- Stevenson, H. 2008. Challenging the orthodoxy: union learning representatives as organic intellectuals. *Journal of In-Service Education*, Vol. 35, No. 4, pp. 455-466.
- Stevenson, H. and Gilliland, A. 2015. Teacher Unions at the Heart of a New Democratic Professionalism. J. Evers and Kneyber, R. (eds.). *Flip the system: Changing education from the ground up*. New York, Routledge.

- Stiles, P. 2018. *Disrupting Leadership – Leadership Disrupted*. Unpublished doctoral candidacy paper. University of Alberta, Canada. https://era.library.ualberta.ca/items/eddd332f-2045-4937-87a7-329f411340ec/view/e80b2785-1222-49fc-b535-ce3792250af6/Stiles_Penelope_Jean_201909_PhD.pdf (Accessed 12 August 2020)
- Tiger, Y. N. 2019. Indigenizing the (final) frontier: The art of Indigenous storytelling through graphic novels. *World Art*, Vol. 9, No. 2, pp. 145–160.
- UNESCO. 2019a. *UNESCO's Futures of Education*. Paris, UNESCO. <https://en.unesco.org/futuresofeducation/> (Accessed 12 August 2020)
- UNESCO. 2019b. *Global Futures Literacy Design Forum*. Paris, UNESCO. <https://en.unesco.org/events/global-futures-literacy-design-forum> (Accessed 12 August 2020)
- UNESCO. 2020a. *Futures of Education – Request for Proposals*. Paris, UNESCO. <https://www.ukfiet.org/2020/request-for-proposals-for-background-papers-contributing-to-unescos-futures-of-education-initiative/> (Accessed 12 August 2020)
- UNESCO. 2020b. *Education in a post-COVID world*. Paris, UNESCO. <https://en.unesco.org/news/education-post-covid-world-nine-ideas-public-action> (Accessed 12 August 2020)
- Union of Education Norway. 2003. *Additional Sources of Knowledge* (Flere kilder til kunnskap). Oslo, Union of Education Norway.
- Union of Education Norway. 2013. *Research for practice and profession. The Education Association's research policy*. <https://www.utdanningsforbundet.no/varpolitikk/kunnskapsgrunnlag/publikasjoner/2013/forskning-for-praksis-og-profesjon.-utdanningsforbundets-forskningspolitikk/> (Accessed 11 August 2020.)
- Union of Education Norway. 2020. *The Norway-Canada Partnership*. https://www.utdanningsforbundet.no/globalassets/var-politikk/publikasjoner/eksterne-rapporter/norcan_nasjonal_sluttrapport_2019.pdf (Accessed 11 August 2020.)
- Urry, J. 2016. *What is the Future?* Cambridge, Polity Press.
- Ure, O.B. 2007. *Lifelong learning in Norway: a deflating policy balloon or an act of piecemeal implementation?* Oslo, Fafo.
- Verger, A., Fontdevila, C. and Parcerisa, L. 2019. Reforming governance through policy instruments: how and to what extent standards, tests and accountability in education spread worldwide. *Discourse: Studies in the Cultural Politics of Education*, Vol. 40, No. 2, pp. 248-270.
- Webb, P. and Gulson, K. 2015. *Policy, geophilosophy and education*. Rotterdam, Springer.
- Webb, T., Sellar, S. and Gulson, K. 2019. Anticipating education: governing habits, memories and policy-futures. *Learning Media and Technology*, <http://dx.doi.org/10.1080/17439884.2020.1686015>
- Yosef-Hassidim, D. 2018. *K–12 Education as a Hermeneutic Adventurous Endeavor: Toward an Educational Way of Thinking*. New York, Routledge.
- Zuboff, S. 2019. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. New York, Profile Books.
- Zhao, Y. and Gearin, B. 2018. *Imagining the Future of Global Education – Dreams and Nightmares*. New York, Routledge.
- Zhao, Y., Wehmeyer, M., Basham, J. and Hansen, D. 2019. Tackling the Wicked Problem of Measuring What Matters: Framing the Questions. *ECNU Review of Education*, Vol. 2, No. 3, pp. 262–278.