

Twin Peaks

Exploring the Boundaries of
Public Education

A Report on the Proceedings of the
2018 Twin Peaks Research Summit



The Alberta
Teachers' Association





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A Report on Proceedings of the
2018 Twin Peaks Research Summit
uLead Preconference,

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Executive Summary

The best education for our children and youth today and into the near future of 2030 is the local public school.

This optimism and confidence is born of a deep, abiding and enduring societal commitment to the intellectual, emotional and spiritual growth of the young. These aspirations and values are shared and enacted by the teaching profession and fundamental to the work of forward-thinking teacher organizations.

Informed by research and the professional judgment of teachers, and supported by a commitment to open, deliberative, democratic decision-making and a focus on social justice, teacher organizations should act collectively and locally in the face of growing global assaults on the public nature of public education. This involves revisiting the public school as the foundation for creating a public and then again, as the future invites, further reflecting on the question, What will be public about public education in the year 2030?

At the Twin Peaks 2018 research summit, moderated by Jean Stiles, Edmonton Public Schools, Alberta, the imperative for collective intellectual, academic and political action was clear, and both the spirit of the summit and the quality of the individual representations are neatly and thoughtfully articulated in this report. This was the third in the series of annual gatherings of a community of international researchers and teacher organization leaders committed to countering the dominant neoliberal narratives that are undermining public education.

Mobilizing research for action in the public interest

The central conclusion of the summit may be that while there are certainly vexing challenges to public education, academic and organizational competence and commitment are alive and well and, as teacher organizations and researchers both outside and inside the academy, we have much “home-grown” capacity to mobilize research in the public interest.

Teacher organizations can invest in research to gather and share evidence locally, nationally and internationally and collaborate across their current boundaries with university researchers and with other professional organizations. In many ways, the day-to-day challenges faced by teachers in the countries represented at Twin Peaks, while subtly different, will continue to be driven by global influences and future forces that invite us to sustain ongoing partnerships among teacher organization and research communities to offer up commitments to mobilization, public engagement and action. Such actions can be most effective when strategic foresight and democratic, member-driven activism

are used to anticipate future directions, develop progressive policy and build proactive campaigns in the public interest.

Key findings

In the context of the promises of the present moment and the near-future challenges to public education, the following key findings and recommendations for action and advocacy are to be found in the summit conversations:

- **Equality and Quality**—There is much to do and there are positive gains to build upon, particularly for Aboriginal and Indigenous education. The proceedings make clear that there remains much unfinished business for us all when it comes to ensuring a high-quality and high-equity public education system. The competing and, at times, distracting and compounding challenges of standardization and attempts to globalize education systems must not be permitted to obscure or allow abdication of responsibility for local and urgent responses to social injustice wherever it is encountered.
- **Standardization**—The conflation of standards with standardization remains a real challenge. The data and analysis of public schooling currently generated through massive international and standardized testing continues to pervade and reduce quality teaching practices in our respective jurisdictions. Avenues forward include enhancing the data literacy of the profession and turning back insidious encroachments into our collective classrooms and systems in order to defend public schools from the well-funded efforts towards global alignment and exploitation of our students, vulnerable communities and our teacher colleagues. In some jurisdictions, accompanying the growing data infrastructures for student learning are increasing surveillance and control efforts that, if left unchecked, could diminish professional autonomy through an increasingly intense focus on standards of practice and credentialing.
- **Artificial Intelligence**—Without vigilance, understanding and action, current inequalities will manifest further in our increasingly digitally integrated and technologically driven education systems. Australian and Canadian analysis here provides a compelling case that artificial intelligences, which are already pervasive in our education systems and other key public institutions, are being designed and integrated with the potential to share data and make decisions that might be free from human oversight or interpretation, with damaging consequences. Particular attention and efforts to insist on transparent and adequately governed technological developments in education will be necessary to protect students, the status of the profession and the public interest.
- **“Datafication” and the Public Interest**—Teacher organizations and researchers must be increasingly vigilant in working with organizations and individuals whose growing purpose is to undermine the “public” in public education. This is being done through a growing reliance on data infrastructures that tend to drive narrow research agendas that can misrepresent the complexity of teaching and learning and contribute to a culture of competitive comparison. These include certain governments, growing public–private partnerships such as the OECD

(especially in relation to its Program of International Student Assessment [PISA] and the Teaching and Learning International Survey [TALIS]), and the International Summit on the Teaching Profession (ISTP). In this environment, teacher organizations should see their role as including advocacy for learning and challenging school systems to sustain their commitment to the “publicness” of public education.

Into the future

Perhaps equal with the need to redouble our efforts and understandings around existing inequality and standardization in our systems is the imperative to act to truly seek to understand and inform the profession and policy-makers about developments in silicon technologies and in biological and neurological sciences. Indeed, improved interest in and engagement with science and research across multiple disciplines into effective development and governance of such technologies will be essential if the allure of the superficial, and possibly real, benefits provided initially by these existing and emerging algorithmic and biotechnologies are to be overcome and challenged by the teaching profession and union activists.

Other matters were raised at Twin Peaks, as you will see. What matters most is that real issues of substance were on the table and explored in a collective spirit of action to engage the current and future forces that will have a critical influence in shaping the “public” in public education.

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Introduction: A Scouting Party for the Future of Public Education in Canada

The purpose of a gathering such as Twin Peaks is to push thinking and explore the “edges” of current issues in public education. Started in 2016 as a prelude to a larger international conference on leadership, some 42 researchers and professional leaders have explored and shared their thinking about the challenges on the frontiers of public education in the three meetings held between 2016 and 2018.

In 2016 the focus was on two themes: (1) the threat to public education from commercial interests and (2) the challenge posed to practice by the “learnification” of education, a term coined by Biesta (2012), who expressed the concern that too much focus on the individual student leads us to ignore the other purposes of education beyond learning, causing us to lose sight of the “for whom” and “for what” of education. Sam Abrams (Columbia University), Pasi Sahlberg (Harvard), Sam Sellar (University of Queensland), Gerry Fallon (University of British Columbia) and Jean Stiles (Jasper Place High School) explored the first of these issues, while Carol Campbell (Ontario Institute for Studies in Education [OISE]), Simon Goodchild (University of Agder [Norway]), Jón Torfi Jónasson (University of Reykjavik), Roar Grøttvik (Union of Education, Norway), Brenda Spencer (University of Calgary) and Greg Thompson (Murdoch University) explored the second topic. The day was moderated by Joel Westheimer (University of Ottawa).

One major topic that emerged from both conversations was datafication—the reduction of complex, relational educational processes and purposes into simple data points and algorithms. Data, whether from testing or assessments, like the Program for International Student Assessment (PISA) or Trends in International Mathematics and Science Study (TIMSS), provides the core business use case for commercial products and services, especially software services (reporting, predictive analytics, machine intelligent and artificial intelligence systems, learning management systems) as well as other products and services. One example is the Fraser Institute’s ranking of schools using limited data sets and interpretations of these data. While there are many abuses of data in this work, the Fraser Institute rankings often shape the conversation. While these issues are not new (Garipey, Spencer and Couture 2009), they have a sense of urgency about them as the scale of commercialization grows (Abrams 2016).

Linked to this understanding of learnification and datafication is the commercial movement toward “enterprise solutions for public education,” meaning systemwide implementations of commercial “solutions” to problems such as the “math crisis” (sic) or the lack of success of some groups within the student population or the need to “solve” the problem of student assessment. This approach to deliverology (Barber 2010)—policy-driven delivery systems that rely heavily on data, limited understanding of the scope of the challenge and simple solutions—provides a strong rationale

for commercialization within public education and for the role of commercial interests in policy making. This is an especial issue for those engaged in the work of sustainable development and education (Murgatroyd and Sahlberg 2016).

In part as a result of these conversations, Sellar, Thompson and Rutkowski (2017) published *The Global Education Race: Taking the Measure of PISA and International Testing*. The book captures key themes of the discussion at Twin Peaks, but takes the discussion further, exploring the validity of the measures then used in PISA (a theme returned to in 2018) and the politics of the use of data. The book has subsequently been translated by our colleagues in Iceland and has been read widely.

In 2017, with Dennis Shirley (Boston College) as the moderator, the theme was the precarious future of public education and the implications of emerging patterns of policy and trends for teacher organizations. An impressive array of teacher organizations were present—British Columbia Teachers' Federation (BCTF); Alberta Teachers' Association (ATA); Education International; California Teachers Association; Canadian Teachers' Federation; and the Union of Education, Norway. Attendees were challenged with effective and focused presentations from Jan Jagodzinski, Kent den Heyer, Terry Carson and Jackie Seidel, who launched a collection of papers, *The Precarious Future of Education: Risk and Uncertainty in Ecology, Curriculum, Learning and Technology*, at this event. Other presenters included Stephen Murgatroyd (Collaborative Media Group), David King (former minister of education, Alberta), Jón Torfi Jónasson (University of Iceland), Jean Stiles (principal, Jasper Place High School), Pasi Sahlberg (Harvard), Sam Sellar (Manchester Metropolitan University), Greg Thompson (Queensland University of Technology), Charlie Naylor (BCTF), Roar Grøttvik (Union of Education, Norway), Jelmer Evers (UniC, Netherlands), Eric Heines (California Teachers Association) and David Edwards (Education International).

This meeting produced many synergies. Work on datafication continued, with significant presentations on big data and small politics (Sam Sellar), leadership and marketization (Greg Thompson), and small data (Pasi Sahlberg). An exploration of what the kinds of patterns and trends identified throughout this session would lead to in terms of research also produced some interesting dialogue, supported by a world café conversation about challenges, threats and opportunities.

Stephen Murgatroyd reminded all about the students' concerns—the voice of the students needs to be heard, especially given their growing sense of stress and distress about schools and schooling, and the growing health, anxiety and stress behaviours we see reported across the developed world. The Alberta Teachers' Association's own work in *Growing Up Digital* captures the challenges of the impact of technology on teaching, learning and the sense of self.¹ He also briefly outlined four scenarios for the future of public education, which he and others had developed to help position the future of public education (Murgatroyd 2018).

¹ For a summary of this work and its findings, see [www.teachers.ab.ca/Public%20Education/Education%20Research/Pages/Growing-Up-Digital-\(GUD\)-Alberta.aspx](http://www.teachers.ab.ca/Public%20Education/Education%20Research/Pages/Growing-Up-Digital-(GUD)-Alberta.aspx) or <https://tinyurl.com/yde6bomt>.

The outcome: an understanding that teacher organizations need to develop systematic, strategic approaches to the challenges they face through the greater use of strategic foresight, small data and learning from the experience of others. Resilience and adaptive capacity can be built through collaboration and cooperation between teacher professional bodies and within them: no one is standing alone. Challenges to public education in Iceland, Norway, Britain or the US are challenging to all who are committed to public education. Building resilience requires focused, effective research and skills with data so that the policy positions taken by those who oppose or seek to weaken public education can be challenged.

In 2018, Twin Peaks was bigger than ever, with a broad map for the journey across the peaks. In fact, the journey was organized as scouting parties of expeditions aimed at unpacking an issue and providing a basis for exploration. Whether it concerned the new focus for PISA (soft skills and global competencies), the possibilities and threats of neuroplasticity or artificial intelligence, or the work-life balance of teachers faced with the dilemmas of practice, Twin Peaks 2018 explored them with creativity and clarity.

Presenters in 2018 included Kevin Bates (Queensland Teachers' Union, Australia), Roar Grøttvik (Union of Education, Norway), Kent den Heyer (University of Alberta), Kalervo Gulson (University of New South Wales), Rosemary Hipkins (New Zealand Council for Education Research), Greg Jeffery (Alberta Teachers' Association), Peter Hopwood (principal, Donovan Primary, New Zealand), Jón Torfi Jónasson (University of Iceland), David King (former minister of education, Alberta), Charlie Naylor (Simon Fraser University), Teijo Pääkkilä (Seinäjoen, Finland), David Rutkowski (University of Oslo), Tore Bernt Sorensen (University Catholique Louvain, Belgium), Greg Thompson (Queensland University of Technology), Jennifer Tupper (University of Alberta), Jason Wallin (University of Alberta) and Taylor Webb (University of British Columbia). Jean Stiles (University of Alberta) acted as moderator.

The themes explored by the fifteen presenters over six demanding sessions were

- the dangers of predictive analytics for the effective practice of teaching and learning;
- large-scale national and international assessments (especially TALIS [OECD's Teaching and Learning International Survey]) and the dilemma they pose for teaching organizations;
- the threat and opportunities of neuroplasticity as a frame within which teaching and learning are now taking place and the implications for the profession of its growth and development;
- the coming reality of machine and artificial intelligence and the impact on teaching as an activity—enabling commercialization on a scale not yet seen;
- the inevitable leverage of teaching standards as a way of standardizing teaching—lessons from the implementation of standards in other jurisdictions and the threat their use may pose to the profession;
- assessment, standards and the challenge of reconciliACTION and meaningful learning for Indigenous peoples—the opportunity and challenges of our response to the truth and reconciliation agenda in Canada;

- “competencies” and challenge—the way in which one country has leveraged competencies as a basis for teacher-led and owned curriculum development;
- the difficulties of reconciling teaching as a professional design activity with highly controlling national standards and the tension between professional autonomy, standards, assessment and control;
- the balance between progressive and neoliberal components in government and the profession and the implications these tensions have for the development of public policy; and
- the implications of these conversations for teacher organizations and the profession.

Twin Peaks is more of an exploration—a conversation, a set of challenges, some edgy thinking—than a rich, in-depth, data-driven exploration of a specific issue. Challenging, encouraging insight and difficult conversation are its primary purpose. Nonetheless, in each of the three sessions held to date, significant issues for public education and teacher professional bodies have been confronted and challenges laid bare.

One theme that cuts across many of the presentations is the gap between the seemingly good intention of a specific initiative or development and the subsequent hijacking of these intentions for other purposes by those with their own political and ideological agenda. Professional standards provide one example. This is introduced as a framework and resource to support the profession but then, over time, is hijacked and becomes an instrument of control, supervision and management. The same can be said of predictive analytics, large-scale international testing (which spurs frequent “math crisis” talk), personalized learning and online reporting.

New concerns were presented, associated with fast-developing cognitive technologies (neuroplasticity, cognitive implants, AI) and technologies intended to “personalize” learning. Promoted by vendors and enabled by certain kinds of policy decisions, these pose a threat to teaching and learning and the public nature of education. Not least of these threats is the further incursion of private and commercial interests into a public space.

The overarching idea of Twin Peaks 2018 was to add contours to a map of the challenges, opportunities and threats faced by public education. Some of these threats were addressed directly—for example, the gradual growth of competency and capability testing, new spaces for PISA, TALIS and TIMSS evaluation, new predictive models—and others indirectly, such as the growth of the global education reform movement and the insidious use of reporting software for managerial control of resources.

Missing from Twin Peaks 2018 was the student voice (which we know from the ATA’s international work is a major driver for change), a range of voices of women teachers and the authentic voice of Indigenous teachers. Strongly present at this event was a sense of urgency about the issues being raised, especially in the light of coming elections across Canada and decisions already made to abolish school boards (Nova Scotia) or to severely constrain their role and scope of action (British Columbia, Saskatchewan and Manitoba). Threats to remove certain roles from within professional bodies (notably principals and superintendents) are also cause for concern.

Several interactions triggered by Twin Peaks are leading to new collaborations with Alberta teachers, administrators and researchers and their counterparts from around the world. These include continuation of international partnerships between Finland and Alberta and the developments of new partnerships with Alberta, Iceland and New Zealand; collaborative work on datafication, artificial intelligence and the future of learning; and ongoing work on the threat of the global education reform movement and the new imperialism of various transnational organizations.

What follows are short summaries of the 2018 Twin Peaks presentations, written by the presenters themselves, reflecting their own voices and experience. Though some are more academic pieces than others, all reflect a commitment to intensifying our understanding of the challenges faced in keeping the *public* in public education. We can see in each of them elements of strategic foresight, insights into current and near future challenges, and evidence of concern about the public nature of public education. Indeed, as various jurisdictions in Canada face up to the new wave of populism and the era of post-truth, fact-free decision making, the challenges documented in each of the three Twin Peaks sessions become more real each time the gathering occurs.

A Starting Point

Jean Stiles, Principal, Argyll School, Edmonton Public Schools

It was my distinct honour to be invited to moderate the third annual Twin Peaks 2018 summit in Banff, Alberta, this past April. The Twin Peaks summits have emerged as one of the many exciting outcomes of the Alberta International (AI) school partnerships. The decision to host a summit in advance of the uLead conference that included AI partnership participants was yet one more way that the Alberta Teachers' Association's leadership and commitment to improving schools has had impact locally and internationally. Previous Twin Peaks summits have acknowledged the paradoxical influences shaping public education today: the ephemeral and often elusive promises of curriculum reform to address increasingly complex global issues; a growing reliance on commercial vendors for learning resources and assessment programs (previously developed by governments); the impacts of privatization and choice; and the dichotomy between big and small data driven by standardization, digitization and "datafication." Previous Twin Peak participants committed to ongoing connections and have been involved in collaborating on research projects, copresenting at numerous international conferences and writing many publications, including *The Global Education Race: Taking the Measure of PISA and International Testing* (Sellar, Thompson and Rutkowski 2017), written after the first Twin Peaks summit.

It is indeed an interesting time in education. School leadership has become a priority and has been cited by the OECD as the most significant consideration for countries interested in school reform (Pont, Nusche and Moorman 2008). School reform has been described as a necessity if we are to prepare students for their uncertain futures. Developing leaders that can guarantee that students will have the necessary skills for countries to continue to be productive and thrive has meant that leaders are being called upon to produce and monitor a teaching profession with "bullet-proof" best practices. In many school jurisdictions, it is becoming increasingly more difficult to entice teachers to leadership roles, and it is not uncommon that close to 50 per cent of school leaders have less than five years in the role and have only experienced their roles as defined in a neoliberal landscape.

As school leaders, we are caught between the hierarchical structures of the institution of school and how life in schools has been for decades—that of control and surveillance—and the impending promise of the *future* that is repeatedly described as perilous and uncertain. It seems we are stuck between the two in an impasse, as described by Berlant (2011) as

a stretch of time in which one moves around with a sense that the world is at once intensely present and enigmatic, such that the activity of living demands both a wandering absorptive awareness and a hypervigilance that collects material that might help to clarify things, maintain

one's sea legs, and coordinate the standard melodramatic crises with those processes that have not yet found their genre of event. (p 4)

In order to move beyond this impasse, we, as school leaders, might need to experiment forward and think radically about the modern education project and disrupt our current understanding of school life and school leadership. The AI partnerships were established with just this sentiment in mind, as another way to consider developing schools that are centred on values of social justice and democracy. The Twin Peaks summits have continued rich learning and dialogue for school leaders and have definitely added to the many fruitful initiatives of the AI partnerships.

As a member of the steering committee for the AI partnerships for the past seven years, I have been privileged to organize, coordinate and participate in numerous AI partnership learning institutes, participant summits and school visits both abroad and in Alberta. During the past seven years, the AI school partnerships between Finland and Alberta (FINAL); Alberta, Ontario, and Norway (NORCAN); and Alberta and New Zealand (NZAL) have received both recognition and, at times, some mistrust. It is my sense that all radical thinking is met with some trepidation, because it produces a lack of control over predictable outcomes and might render uncertainty and even chaos. Built on a theory of change that required that we *think ahead, lead across and deliver within*, students, teachers and school leaders have attempted to demonstrate that the internationalization of education is not just about sharing ideas and facilitating congenial school visits.

As research initiatives, data and analysis from these partnerships were about reflecting on practice, seeing immediate realities through new eyes, and thinking beyond *what is to what could be*. The relationships and trust forged throughout this work and the intense commitments to reform our schools together resulted at times in real policy changes, at both school and system levels. An example of systemic change was evident in the recent iteration of the Finnish national curriculum, which now places an emphasis on student engagement, motivation and agency and on interdisciplinary collaboration. Finnish AI participants speak with pride about how their experiences in AI partnerships led to visible changes to their national policy.

These AI partnerships were inspired and resourced by brave education thinkers who trusted that meaningful change happens when lateral networks of schools are given the time and support to question the purpose of school and to acknowledge and understand the late capitalist forces operating in the neoliberal educational arena, and when school stakeholders are given time and permission to experiment and conduct action research in their schools. A unique and courageous aspect of the partnership work was to include students in the reform efforts, not as mere tokens, but as central participants in the discussions and research initiatives. The Alberta international partnership work has aimed to advance educational development by providing exemplars of innovation at the local school level. In disseminating "lessons learned" from the global network of schools, researchers have worked alongside schools in efforts to acknowledge and celebrate differences while attempting to improve the lives of students, teachers and leaders in schools through advancing the goal of a great school for all.

The series of campaigns launched by AI partnerships held no aspirations of permanent unification, and the naïve notions of one-to-one school partnerships and static linear plans had to be dismissed as unproductive in this type of work. The partnership work is better described as *performative encounters*, acted out to live more desirable conditions in schools, thereby rupturing the status quo to think critically and differently in educational settings. AI partnerships' performative encounters have had the primary intention of acting in action. As such, these encounters produced and explored a range of processes of collaboration, including public workshops, action research experiments, learning institutes, large participant summits, research groups, conferences and much more. The experiments aspired to move beyond pre-scripted, ideological-based narratives to forge new connections, inviting participants to examine the effects of structural forces on their everyday lives.

Through a series of performative encounters, AI partnerships' transversal movements attempted to unfold the radical political potential lying dormant in many schools. In an attempt to open space for the self-determined engineering of collective and singular subjects, these performative encounters activated new relations between people, space and time. The mobile nature of the encounters within the international partnerships made possible multiple becomings for the participants involved. These partnerships' performative encounters included opening the doors of schools and classrooms for "friends" to examine school culture and pedagogical practice and pose many questions, all in an effort to improve lived life in schools. Participants travelled across Alberta and around the globe to live with one another's families and visit one another's schools. Every school team engaged in action research initiatives that would assist their thinking about their own particular schools and the problems or issues they might wish to address.

For example, in October 2017, young people and their teachers from Norway, Finland, Iceland and Alberta gathered in Reykjavik, Iceland, to explore the impact of the AI partnership efforts at the More Than Your Evidence international summit. This was an opportunity for the youth who had been in the AI partnerships from their inception to give school leaders, researchers and policy makers advice about their lessons learned throughout their times in the partnership work, examining how this has played out in their lives now that they have graduated school and moved into the next phases of their lives. They had insightful and deep learning to impart. They reminded us that the work we do as a community to question and think about our lives in schools, universities and the policy arenas of our education project is critical and necessary as they feel the pressures of the world and its fast-paced, late-capitalist, technologically driven forces.

The AI partnership work has definitely succeeded in bringing perturbations to the traditional spaces of schooling that have often appeared rigid and hierarchical. A shifting of the power dynamics in the AI schools has led to fruitful projects and experiments that have had distinctive impacts in the areas of curriculum design, assessment, cultural recovery and public assurance. Movement in the AI partnerships has taken place when the participants and facilitators have embraced experimentation and have released themselves from fixed ideas of specific pathways or expectations and outcomes. This does not suggest that there were not also examples where thinking did not change and things

remained static, but this was perhaps when we returned to past habits of searching for magic bullets. However, many of the AI projects and initiatives have agitated or disrupted our understandings of school leadership and life in schools and how we can shake the system loose and open spaces for new thinking, which in turn has produced new problems to consider.

All of this is an ongoing project to rethink schools and education as we each attempt to understand the conditions within which we operate, the forces that are shaping us in schools and the ways forward to shake loose and create great schools for all students.

In this spirit, Twin Peaks enables us to deepen our learning and challenge our thinking.

Excursion One: What Are the Implications of Personalizing Learning for the Future of Public Education in a Global Culture of Competitive Comparison?

The idea behind this group of presentations was to focus on the balance of personal learning, the common good, and public accountability and assurance. What are the tensions and challenges of the various trade-offs associated with public education for public good (citizenship, social and economic development, collective creativity and innovation), personal learning agendas, competencies and the need for public assurance about schools, learning and education? What challenges can we see and imagine?

What are the implications of personalized learning for the future of public education in a global culture of competitive comparison?

David Rutkowski, Indiana University

The current landscape of competitive global comparison makes any particular educational initiative subject to the perspectives and values of an international assessment's sponsoring organization (eg, the OECD in the case of PISA). This is due in large part to the influence that international large-scale assessments hold on the global stage. For instance, if the most recent PISA cycle happens to measure aspects of personalized learning, and systems with higher levels of such do better, then personalized learning becomes the cause célèbre. Much will be made of this finding: the OECD will publish policy reports that encourage personalized learning, countries that specialize in this learning style will be lauded as educational heroes, and countries that don't emphasize personalized learning will be shamed, either directly or indirectly. With these levers at their disposal, comparative assessments can either lift personalized learning up as a way to educational success or ignore its very existence. The same could be (and has been) said about public education.

Yet, the influence of the organizations that create the game (ie, what we measure) and set the rules is not all powerful. For example, in the US, the federal government cites stagnant scores on ILSAs [international large-scale education assessments] as the impetus for the privatization of public education, ignoring that the highest-ranked systems around the world are largely made of public schools. This one example of local interpretation of competitive comparison speaks to the complex relationship participating systems have with ILSAs: systems are subject to outside measurement and comparison, but stakeholders within that system can exercise agency in their interpretation of results. Therefore, although global organizations can set agendas and encourage particular practices

and policies, members within participating systems can also use the same results to arrive at different conclusions and to push different agendas.

Regardless of how the assessment results are interpreted by stakeholders from participating systems, the ability to control what is measured narrows the competitive game to select topics that are deemed important by data collectors. This process solidifies testing organizations' legitimacy as important educational policy actors, further ensuring the staying power of international assessments. With the growth of ILSAs, in general, and PISA, in particular, the demand for greater coverage of both content and participation remains high. It is therefore vital to objectively evaluate these organizations and their ideologies prior to consumption and dissemination of their products. This implies a need for oversight by all of the educational community, including but not limited to practitioners and their collective organizations. Helping to set the agenda for what is measured dampens the power currently afforded to international organizations and places that power in the hands of educators. Such a process would require educators from around the world to increase their own assessment literacy so that they can influence what is being measured and hold international organizations, governments and the press accountable for making valid interpretations about results.

What are the implications of personalizing learning for the future of public education in our global culture of competitive comparison?

Tore Bernt Sorensen, Université Catholique de Louvain

Introduction

The guiding question for the panel includes three key phrases: *personalizing learning*, *future of public education* and *global culture of competitive comparison*. My entry point is the latter notion of competitive comparison, which, I would argue, captures the nature of contemporary education governance in many respects. Subsequently, I seek to bring into focus some of the paradoxes and contradictions of competitive comparison and political liberalism underpinning it by drawing on Fourcade's scholarship (2016) on the ordinal society. The main argument is that the strong drive toward quantification currently embraces and promotes individualism; the more personalized the scales of valuation become, the stronger the emphasis on individualism and individual responsibility for success or failure.

Competitive comparison

In recent and ongoing work, I have attempted to put forward an argument for understanding competitive comparison as a mechanism in education governance (Sorensen 2017). Here, I am relying on Robertson (2012), who argues that competitive comparison has come to replace multilateral norm and standard setting as the dominant mechanism of governing in recent decades,

signalling a transformation in the field of symbolic control, in turn shifting sovereignty and authority away from the national and the teacher to the global and global actors. Specifically, competitive comparison is enabled by the mobilization of four distinct yet complementary modalities of power:

- 1. Hierarchical space:** Competitive comparison provides a spatial framer and lever for allocating status by construing a global hierarchy of performers and underperformers that pitches single systems relative to other systems, often represented as a race between countries and their education systems.
- 2. Temporal rhythms:** Competitive comparison is reinforced through regular cycles of data collection, which is meant to provide a space for learning and improvement, temporally structured and hence imbuing a sense of manageability and predictability, yet also continuous tension, within and across systems.
- 3. Evaluative trajectories:** The assessment of systems relative to each other relies on evaluative and normative definitions of the good teacher, the good student, the good leader, the good parent and so on. Such evaluative trajectories will inevitably highlight certain aspects and downplay others, and they tend to invoke the affective through binary categories such as good/bad, better/worse, effective/ineffective, pride/shame and so on.
- 4. Scale:** When competitive comparison becomes embedded in national, regional and global projects, the significance of the mechanism for understanding the outcomes of programmes like TALIS and PISA are amplified.

We should note in this respect that the present drive toward personalized learning in many systems is reflected in the evaluative trajectories forming the basis of competitive comparison, with the emphasis on *learning* as first of all individual development and constructivist pedagogies. This applies to students as well as teachers and, indeed, populations in general. The point to be made is that specific preferences and lenses about human nature and what education *is* and *ought to be* are incorporated into the frameworks that guide professional and public assessment of the state of education, and that these preferences and lenses over time often come to be taken for granted as common sense. Other examples include the distinctive concepts of literacies underlying PISA, or “instructional leadership” in TALIS.

With the scholarship of Hacking (1995), Porter (1995), Desrosières (2002), Espeland and Stevens (1998), Rose (1991), and Rutkowski (2008), we are well aware that quantification, statistics and indicator development inevitably involves descriptive as well as prescriptive dimensions. The concept of competitive comparison complements this scholarship by providing thinking tools concerning how and the degree to which specific evaluative trajectories become entrenched in policy and practice over time and across scales. Certainly, this does not happen overnight or in a uniform manner.

In political terms, the outcomes of competitive comparison depend on the unfolding power relations between involved policy actors. While international infrastructures of educational statistics are increasingly dense and global in coverage, the underpinning concepts and the data they help to

generate continue to be contested and used by numerous organizations with very different interests and horizons of action. Still, agencies like the OECD, UNESCO, the World Bank and many others exercise “epistemological governance” (Sellar and Lingard 2013), which is likely to lead to a “soft convergence” (Rutkowski 2007), because the indicators, and the terms and language they involve, come to provide framing devices in the ways that we think about education. Hence, personalized learning might have very different implications in practice, depending on the actors and interests involved, yet the crucial point is that the drive toward producing data on the individual level is likely to continue.

The ordinal society

I would argue that competitive comparison, the discourses on knowledge-based economy and the strong drive toward personalized learning are closely associated with the prevailing master narrative of political liberalism. Liberalism has arguably come to be taken so much for granted since the 1990s that the basic tenets of the ideology are too often neglected in policy analysis. In this respect, Fourcade’s (2016) critique helps us by teasing out further insights on the paradoxes and contradictions that come with competitive comparison.

First of all, Fourcade (2016) argues that the contemporary embrace of comparison as a governance tool cannot be separated from the ideals of political liberalism. Here, it is central to distinguish between three sorts of classificatory judgments for comparing things and people: *nominal* (oriented to essence or nature), *cardinal* (oriented to quantities) and *ordinal* (oriented to relative positions). While each of these remain widespread, Fourcade depicts societies as increasingly ordinal, an observation that she explains with innovations in digital technologies fuelling the ubiquitous ranking of people, things and organizations, and the advance of liberalist political ideals globally. Fourcade (2016, 180) points out that while “nominality and ordinality must be disentangled in order to realize the political ideal of liberalism, both are simultaneously essential to its performance too. The result is a somewhat paradoxical amplification of each imperative. The patterned, historically constructed specificity of people and things must be recognized; but it must also be suppressed.”

Take the obvious example of PISA. The construction of a single performance scale along which student samples from participating systems can be positioned helps to amplify nominality, reinforcing certain categories and downplaying others. These looping effects (Hacking 1995) produce new subjectivities and new ways of experiencing oneself as being of a certain kind. Based on methodological nationalism, PISA serves as an ideological device entrenching the view of countries as units in mutual and perpetual competition.

Simultaneously, PISA performance scales decategorize the systems taking part, eroding the structures of nominal classification. Hence, while people are classified into social lumps of nominality, these categories and the “lumpy society” are also to be bypassed and possibly unmade. “The solution is thus predicated on the ability to commensurate. The end point of the process, the ultimate realization of ordinality’s ideal of order, is an infinite vertical splitting – a scale upon which

everything and everyone may be accounted for and ranked” (Fourcade 2016, 182). This also means that the same institutions and processes that make the nominal categories salient are often involved in undoing them, too. In education governance, we might hence label the OECD and the European Commission as institutions of ordinality, but there are many others, including national government departments.

More precisely, ordinalization involves decategorizing the nominally classified lumps of society and reclassifying them by means of a scale, as fully continuous as possible. This ordinal restructuring of nominal differences relies on quantification, which helps to transcend boundaries of kind and collapse absolute differences into relative ones (Espeland and Stevens 1998). Such “levelling” represents a semantic leap toward a more open-ended representation of underlying differences. In liquefying and sublimating nominal categories and “in-kind” solidarities and ties often associated with unjust practices of exclusion and differential treatment, the colour-blind liberal society that delivers the egalitarian promise of objectivity can be realized, based on the identification—or creation—of dimensions enabling comparisons without reference to differences “in kind.” A moral function of ordinalization is that it helps to affirm the liberal democratic ideals of a politics of *freedom*, recognizing difference as a source of mutual enrichment, as well as a politics of *government*, seeking efficiency and control in the disposition of things and people (Foucault 2010; Fourcade 2016). In other words, governance in liberalism involves freeing social groups from nominal categories of classification while seeking to make them more efficient. In doing so, ordinalization helps to detach the “pursuit of objectivity” and “seizing of the world” from the messiness of politics while constructing a robust infrastructure for it (Porter 1995). This deflection of the scope for political conflict with numbers and standards is aligned with the promises of accountability. Here, it is important that ordinalization is sustained by the inclusion of the largest population possible: the more comprehensive the scale, the less contestable, the more significant and legitimate as a policy tool for management and control (Fourcade 2016).

Limitations, paradoxes, contradictions

Fourcade (2016) points out that there are limits to quantification and to how much ordinalization can deliver in terms of the liberalist ideals, because fully continuous and fine-grained scales tend to be unattainable. Therefore, major contradictions and paradoxes persist also in our era of liberal politics, a fact that is interesting to consider in the light of Rittel and Webber’s (1973) classic characteristic of public policy issues as “wicked problems” without straightforward or generalized solutions—only better or worse ones in terms of containing and managing issues.

The notion of ordinalization opens up for a rich research agenda as well as political debate. I will briefly attempt to flesh out the implications and provide some examples. First of all, we should recognize the fundamental paradox of liberalism related to the twin ideals of freedom and control. For example, when directing the lens toward personalized learning, we see a scope for empowerment but also a further means of control. On the one hand, the notion may suggest a politics of freedom

and supporting personal development on individual terms. But, regardless whether personalized learning refers to the *processes* or the *objectives* of learning, aspirations to universalize personalized learning are framed by visions for the overall collective and whole populations. Currently, such visions tend to privilege a human capital theory, pitching individuals rather simplistically as assets in nationally bounded portfolios.

Second, Fourcade (2016, 188) shows that “the society that is liquid in theory continues to be lumpy in practice.” Ordinal society is thus riddled with “phantom de-categorization” and “persistently lumpy politics” due to the limits of quantification, and because ordinal judgments have their own kind of looping effects. We noted above that PISA scales are based on a methodological nationalism amplifying nominal categories by representing countries and systems as mutually competing. However, due to the “reactivity of rankings” (Espeland and Sauder 2007), there are further effects as new subjectivities are formed through the incorporation of ranking criteria into behaviour and self-feelings. Ranks or numbers on a grading scale tend over time to become intrinsically meaningful, with seemingly arbitrary cutoff points. Belonging to Top 5 in PISA, being a graduate from a Top 50 university or having an IQ over 130 means something and has very real implications politically and socially. We could say that ordinal scales (with associated evaluative trajectories and hierarchical spaces) tend to take on lives of their own; ordinalization might melt away some of the solids of nominal differences, but new and sometimes surprising solids and rigidities will emerge in the supposedly liquid scale.

It is a vital point that ordinalization suggests a promise of movement. The idea of meritocracy comes to mind; whether you move up or down the scale may be understood as the result of your individual choices that can be measured, made more efficient and capitalized upon. In this, we recognize a human capital view of the world and a radically individualist and anti-elitist philosophy according to which freely operating individuals make decisions for themselves and face the consequences. Ordinalization and competitive comparison can thus not be understood separately from the moral imperative to *optimize*. With the surge in data and digital technologies, we are able to become investors, entrepreneurs and accountants of ourselves, all the time keeping track (Fourcade 2016). This applies to governments assessing system performance, as well as individuals, including teachers, school leaders and students. In thinking about personalized learning in the context of competitive comparison, we should thus note that ordinalization embraces and promotes individualism; the more personalized the scales of valuation become, the stronger the emphasis on individual responsibility for success and failure. Another pertinent example is provided by the controversial use of value-added modelling (VAM) as a component in teacher evaluation frameworks (Sorensen 2016).

These observations hold fundamental political lessons. A crucial question concerns whether the assessment of learning along ordinal scales actually delivers on the liberal promise of a politics of freedom—or whether it primarily serves as a means to control and monitor. The ordinal scaling of individuals, organizations and social groups would appear to be heavily compromised when it ends up recreating those nominal categories and (stereo-) types that it was initially designed to erase. The

statistical patterning of better and worse performances in a seemingly objective form brings the risk of resolidifying nominal differences between social groups with a vengeance, for example by representing cultural differences along ethnic, lingual and minority/majority lines as primordial. When competitive comparison and ordinalization merely lead to the strengthened monitoring of stratification and discrimination levels without a political commitment to ameliorate conditions, we should ask if they are really worth the resources spent.

In this respect, we might also ask the extent to which PISA, TALIS, TIMSS, the UNESCO Education for All, UN Sustainable Development Goals and other large-scale policy tools revolving around quantification have actually contributed to a politics of freedom or merely serve government and control. Clearly, these examples are very different, yet each of them has increased the freedom for policy makers to use the argument of borrowing international best practices in a rather unsubstantial manner to legitimize domestic reform. However, that is a separate issue from whether they have helped to improve educational practices and make them more efficient.

One pertinent aspect relates to the degree to which the four modalities of power underpinning competitive comparison in particular cases help to address the issues confronting education sectors. While there is an abundance of data, their limited capacity in establishing causal relations, as well as the short-term horizon of many reforms, would appear to undercut a politics of freedom and bring about any real change.

Finally, a note on education as a public service. Competitive comparison and ordinalization thrive on the allure of digital technology. Drawing on Meyer and Rowan (1977), Fourcade and Healy (2017) argue that organizations gather information because they *must* (in line with normative and moral professional recommendations), because *everyone else does* so (taking the institutional environment into account), but most of all because they *can* (enabled by technology), the latter based on the reasoning that while the accumulated data may overwhelm analytical capacities here and now, they will eventually become useful and valuable. The strong drive toward sweeping up as much data as possible about students, teachers, schools, systems and so forth provides excellent possibilities for private sector enterprises offering assessment and evaluation technologies to become involved in the provision and governance of education (Ball 2012; Hogan, Sellar and Lindgard. 2015; Junemann and Ball 2015).

This raises serious issues concerning the democratic accountability of the ensembles of policy actors involved in governance. The cocktail of ordinalization and competitive comparison mainly serving the politics of government control, without delivering on the politics of freedom, combined with private businesses making a profit from assessment technologies and other services can only undermine public trust in education systems and demotivate professionals, leading to “defensive education” fixated on blame-avoidance (Hood 2011) and counterproductive to student learning, however personalized it may be represented.

Individualized/personalized learning

Teijo Pääkkilä, Principal, Seinäjoki High School, Finland

The background to this presentation is my exploration of the question “Why has personalized and individualized learning been discussed extensively and why have some schools adopted the methodology of personalized learning?” One reason is the new core curriculum adopted in Norway, and the other one is that schools and learning material and environments are being digitalized at a fast pace.

For context, here is a quote from the Finnish national core curriculum: “Students’ capabilities, interests, views and individual needs also underlie the selection and development of the learning environments and methods.” This is then reflected in the use of these key words in the Finnish national core curriculum:

- Transversal competences
- Exploration
- Digital learning environments
- Problem-solving
- Critical and creative thinking
- Command of entities and multidisciplinary competence
- Teamwork skills
- Ability to plan, evaluate, take responsibility of learning
- Meaningful learning experiences
- Learning-to-learn skills, learning to trust themselves as learners

Personalized learning has been gaining popularity over the last several years, almost without any serious consideration of the repercussions or unintended consequences of its deployment.

Here is a short list of doubts and hesitations related to personalized learning:

- Will students become engaged and motivated? It is often presented as a fact that personalized learning is motivating and leads to good learning outcomes, but does it?
- Will they learn? When a student feels no social pressure to learn, what will happen to their learning?
- Does not everybody need to learn everything anymore? The question of what is necessary for everybody to learn should be considered.
- Will they fall through the cracks and will there be new cracks? Personalized learning is often presented as offering a solution so that students will not drop out anymore, but the validity of that claim should be contested from the perspective that it is simultaneously creating new cracks for students to fall into.

- Will they be successful in high-stakes exams? Some teachers share their concern that personalized learning may not lead to learning outcomes that are measured in high-stakes exams.
- What will the new role of the teacher be?
- Will there be learning in social contexts or social pressure to learn? Most of the personalized learning, if not all, will undoubtedly be learning online with a computer, maybe in touch with someone occasionally, but learning that takes place face to face will be rare. How will that loneliness shape the learning and the learning experience and what will the competences be that won't develop in that context?

Here, too, is a quick reality check. Personalized learning will be largely digital, and these are some of the aspects that should be considered:

- **Maturity.** Personalized learning demands maturity, and not all learners are ready for such work and demand a social context so as to be able to learn successfully.
- **Digital versus traditional learning material.** What are the differences in learning in a traditional context and learning using digital environments, and how do these different contexts affect learning outcomes?
- **Reliance on digital learning environments.** The learning becomes much more vulnerable and dependent on outside factors than face-to-face learning.
- **Extra work for teachers.** What do teachers need to do to provide environments for personalized learning?
- **Students becoming stressed out.** Digital learning environments enable strict control and multiple ways to carry out assessments, which can easily be misused to control students and push them to perform better but at the same time create a learning atmosphere that is discouraging and stressful.
- **Quality and quantity of learning outcome:** Do we provide the right kind of learning?
- **Value for money.** Does the investment pay back, or do we just get hooked on digital?

When we talk about personalized learning and carrying it out, are we actually acting in accordance with the quote given at the beginning: “Students’ capabilities, interests, views and individual needs also underlie the selection and development of the learning environments and methods”? To develop personalized learning, we need to approach it mindfully, paying careful attention to the bigger picture and asking the question “Whose personalized learning is this, and what purposes does it serve?”

Excursion Two: Will Standards Become the Stalking Horse for Data Analytics and Artificial Intelligence to Shift Control Away from the Public?

The idea behind this excursion was to explore the notion of standards and predictive analytics and their use in public discourse, and to look at coming and new developments in cognitive neuroscience and artificial and machine intelligence and the potential challenges these pose to our understanding of teaching, learning and education.

Will standards become the stalking horse for data analytics and artificial intelligence to shift control away from the public?

Kalervo N Gulson, University of New South Wales

Artificial intelligence (AI) is rapidly becoming a central part of contemporary life. Boden (2016) states that “Artificial Intelligence seeks to make computers do the sorts of things that minds do” (p 1). There have been two main aims of AI research: (a) modelling intelligence in living minds and (b) using computers to act on the world in intelligent ways (Boden 2016). It might be better to think of AI as a heterogeneous set of techniques and tasks, rather than a single ‘thing’ (Gulson et al 2018). AI will not be a separate thing to education—that is, the use of AI will likely intensify how education is currently organized.

In this short paper, I want to make the following points about AI that may bear consideration in relation to standards and shifting control of education away from the public:

1. About the link between standards and interoperability that has meant that forms of AI are easily adoptable into and by education systems
2. About issues of trust and AI in education governance
3. That much of the AI used in education is from corporations which raises issues of proprietary versus public knowledge
4. That policy and leadership responses may be able to focus on issues of transparency to make AI a form of open knowledge
5. That AI may need to be seen as a new public actor

Point one: standardization and interoperability

The standardization of data has been a key part of emerging data use in education systems and schools. The collection and analysis of the same types of data across a system and between systems has meant that there can be interoperability—that is, different computer systems can speak to each other, even if they use different types of software and platforms in education. The importance of the combination of standardization and interoperability is that contemporary education systems and schools are interconnected via computers that speak to each other, usually via a human operator who provides instructions, and decisions are made based on analyzing data (Sellar and Gulson 2018).

Point two: trust

With AI, machines could speak to each other between these sites without any human oversight, or humans to interpret the outcome. One key point to highlight is that the predictions of AI agents are based on approximate calculations. While the outcome of an AI calculation will be known, the process by which the outcome was arrived remains a black box, aside from what is part of any initial learning algorithms and the labelled data that trains the machine. Approximations are not a problem in themselves, but do perhaps matter if machines are talking to each other without human oversight and the calculations cannot be followed. Hence, in questions of education governance and in school leadership, the question of trust accompanies approximation—that is, in what if any areas of education policy are we able to, and should we, trust autonomous forms of computation (Walsh 2017)?

Point three: proprietary knowledge and technology companies

Much of the work in AI in education is done by technology companies. One issue is that AI protocols and standards are mostly in-house corporate developments. As such, they are proprietary; that is, they remain opaque to anyone outside of the corporation. This can mean that systems and schools become governed by machines in which the underpinning processes are not accessible to the public. The software has been bought, but not the knowledge of how the public is being governed. This has given rise to some city governments, for example, such as Barcelona, using only noncorporate open source software (Leonard 2018).

Point four: transparency

AI is good at eliciting patterns; it is deficient in making socially aware decisions. One response we may consider in education is to call for “core agencies” such as education to no longer use opaque or “black-box” AI systems (Campalo et al 2017). As my colleague Greg Thompson (personal correspondence, May 2018) has identified, the key is to make the underlying technology transparent in that those who are affected by AI, and will use AI, understand both how it makes decisions and what these decisions might mean in use. If a [software] corporation refuses to make this happen, the policy response could be to refuse to have this software in use.

Point five: new public actors

AIs are already and will continue to be new types of agents in the world, and in education they will be machines that will mediate the social and cultural interactions in schools and systems. As such, in order to think through the way AI changes the public, we may need to reconsider AI as another public policy actor.

Will standards become the stalking horse for data analytics and artificial intelligence to shift control of public institutions away from the public?

Taylor Webb, Associate Professor, University of British Columbia

To a large degree, we can answer the question in the affirmative—that is, yes. However, this is not new; rather, data analytics and AI intensify the shift of control of public institutions away from the public that has been occurring since Milton Friedman’s neoliberal economics. The intensified shift in governance continues to move institutions away from the public (eg, quasi-markets and performance audits), but now installs an entire new set of “experts” that assume control of these institutions—computer scientists, software engineers and so on.

For my purposes, AI and machine learning are largely premised on ideas of artificial neural networks and, to a large extent, on ideas of neuroplasticity. As such, I argue that neuroplasticity will render standards largely obsolete through the related intensifications of “personalized learning” that will be supported by data analytics and AI. Personalized learning and neuroplasticity will render the logics of aggregation of standards obsolete.

Neuroplasticity can be understood as the ability of the brain to undergo temporary or permanent changes when influenced (eg, environmentally, trauma), the ability of the brain to modify its connections or rewire itself. As such, life itself can be engineered, educational subjects can be enhanced or optimized, and, as with neuroplasticity’s AI counterparts, an entire new set of “experts”—neurobiologists, medical experts, and so on—will assume control of these institutions. Not only can this happen, it is happening.

From *Beyond Bioethics: Toward a New Biopolitics*, by Obasogie and Darnovsky (2018), I think we can see five major takeaways that will be of concern to educators:

1. Be sensitive to the ways in which commercial pressures and market incentives can warp deliberations on the potential social impacts of neuroplasticity and neuro-commerce technologies, including scientific tools in schools and classrooms, and pseudoscientific tools and instruments. Pay close attention to how science and medicine are not only healing endeavours but also profit-seeking enterprises that, like all market-oriented ventures, need regulation and oversight.

2. Reaffirm teaching and learning as social and environmental interventions, but assume greater humility and a precautionary approach in questioning whether we have the wisdom to understand the full range of social and biological consequences associated with neuroplasticity, including alterations to basic understandings of what it means to be human.
3. Be sensitive to the discriminatory attitudes that may promote and allow social preferences to guide the way neuroplasticity is implemented, and to the deleterious impacts this can have on the preconditions for, and basic notions of, educational equity. Neuroplasticity has the ability to reaffirm social preferences and lines of difference at a molecular level.
4. Ensure that neuroplasticity serves the public interest. The opportunities in front of us presented by neuroplasticity are profoundly political; they create winners and losers, shape society, shape our very selves, and implicate society's deepest values about who we are and what we want to be. Do not leave democratic oversight to the market.
5. A “new” eugenics, driven by market forces as opposed to state discrimination, could look eerily similar: *ethopolitics*—the politics of life itself and how it should be lived (Rose 2007).

When culture has no room left for nature, Pokémon will walk the earth

Jason Wallin, University of Alberta.

Editor's note: segments of this article have been published in “Catch 'Em All and Let Man Sort 'Em Out: Animals and Extinction in the World of Pokémon GO,” Chapter 5 of Interrogating the Anthropocene: Ecology, Aesthetics, Pedagogy, and the Future in Question, ed J Jagodzinski, Palgrave MacMillan 2018. Used with permission of Palgrave Macmillan.

While it might be said that culture in the Anthropocene era has receded from a natural world it no longer has time for, it is equally apparent that animals proliferate in the cultural imaginary. What was undoubtedly a significant aspect of Pokémon GO's initial novelty was its capacity to metamorphose reality through digital augmentation so as to imagine a world enchanted with diversity and difference. Pokémon GO's augmented reality produced new conditions of excitement, chance and diversity from under the ordered habits of public space, leveraging the temporary re-exploration of the given world. As mainstream news celebrated, Pokémon GO had ostensibly mobilized the sedentary bodies of gamers by rethinking all of reality as an undiscovered land. Millions of players flooded into this new world to first discover then resolve its difference, relegating its quasi-animals to war with one another.

While the performative gestures of Pokémon GO redramatize the subversion of life under the ambit of Man, it concomitantly articulates a new set of conditions intimate to the Anthropocene. Herein, Pokémon GO is not simply an index of anthropocentrism and its implications upon the future of planetary life, but of the boundary event between the Anthropocene and the exploitative cheapening

of life intimate to what Moore (2017) has dubbed the Capitalocene. Beyond the investment of matter within the image of “Man” intimate to the anthropocentric pretext of the Anthropocene, Moore avers that the current ecological and environmental crisis that characterizes the Anthropocene is not the effect of an abstract humanity (*Anthropos*), but rather the crowning achievement of capitalogenesis—the annexation of reality by capital.

Just as the labour of the inhuman is overtly exploited within the augmented game space of Pokémon GO, so too the perambulatory labour of the player is fed into to Niantic’s billion-dollar digital marketplace. As a symptom of the capitalocene, the affective labour of the player is transformed into a surplus of free labour. Following Deleuze’s prescient speculations on the rise of “open” surveillance technologies in late capitalism, Pokémon GO dramatizes the inscription of affective labor within widely distributed networks of social control. That is, within the augmented world of Pokémon GO, players willingly or perhaps ambivalently invest themselves within the control assemblage of GPS tracking, data mining and surveillance by private corporations. As Deleuze characterized the synopticon, the power of Pokémon GO is not merely its capacity to track players at a planetary level, but rather to algorithmically anticipate and motivate their behaviours, in effect freeing desire but on behalf of circuiting it to the new conditions of immaterial labour and the valorization of movement, exchange and genetic restlessness with which it is commensurate. Like the AI-animals that populate the augmented world of Pokémon GO, we too are deterritorialized that the energy of our flight might be recaptured for profit. In short, what happens to the Pokémon within Niantic’s worldwide arcade has already happened to us.

Control, regulation and scope of practice in the teaching profession: a synopsis

Charlie Naylor, Simon Fraser University

This presentation is based on Naylor, C. 2018. Control, Regulation and Scope of Practice in the Teaching Profession: An Environmental Scan of Selected Canadian Jurisdictions. Edmonton, Alta: Alberta Teachers’ Association.

The forthcoming review of teaching standards and their implementation over time explores influences that have led to increased government control of the teaching profession, including neoliberalism and new managerialism, the manufactured erosion of trust in the public sector by neoliberal governments, what constitutes a professional, and teachers’ accountability and autonomy. The trend toward increased control of the teaching profession is international, and a wide range of the international literature is accessed to provide evidence and analysis of this trend.

The report argues that neoliberal policies implemented through new managerialism have negatively impacted the teaching profession in many countries, with reduced trust in and autonomy for

teachers, accompanied by increased management control and accountability. Such increased control includes changes to teacher regulation.

The report compares developments in teacher regulation in four provinces (British Columbia, Ontario, Saskatchewan and Nova Scotia) and then compares teacher regulation with regulations in four other professions (nursing in British Columbia, law in Alberta, engineering in Ontario, and physicians and surgeons in Saskatchewan).

The teaching profession is treated differently from other professions by various provincial governments, with greater control of teachers' regulatory governance in provinces such as British Columbia and Ontario. Recent changes in Saskatchewan and Nova Scotia either establish or create a foundation for greater government control. Government actions to increase regulation are often predicated by consultants' reports that have prominent rationales and rhetoric but minimal evidence to support them. In some cases, consultants' reports are accepted in total (Nova Scotia) and in some cases selectively (Saskatchewan). Where selective utilization of a report occurs, governments may increase control beyond the consultant's recommendations.

Teacher standards reflect increased control because they shift the notion of professionalism from internal (the teacher using her/his judgment to act in the best interests of students) to external (a list of what is expected of a teacher). Initially, standards are often shown as enabling the profession by encouraging reflection and discourse, but in some cases (British Columbia) the language has changed to create checklists that explicitly link standards to discipline. Checklists reduce autonomy when those in power positions (administrative officers forcibly removed from teacher unions) use checklists to "maintain standards." There are some exceptions in jurisdictions like Scotland, where standards are voluntarily accessed and teachers need not discuss them with administrators. Teachers and teacher unions have often participated in teacher standards development, but the report argues that this is problematic because of the actual or potential shift from standards as enablers of professionalism to standards as tools of managerial control and discipline of teachers.

Standards, once established, can be and have been changed by governments or their government-controlled regulatory boards. The danger inherent in the establishment of standards is that the initial optimism, good will and focus on improving the teaching profession that engaged teachers and some unions is lost when governments justify their stance on making teachers more accountable with greater levels of control through managerial compliance with checklist-type standards and regulations.

Excursion Three: Will The Growth of Large-Scale Assessments and Global Metrics Distract Us from a Future of ReconciliACTION and Social Justice?

This excursion sought to explore the tensions between data-driven policy and investment, global league tables, and the need to understand the complex local conditions in which social justice occurs. A great school for all depends on nuanced actions in a localized context.

Instrumentalism and the (im)possibilities of reconciliation/ACTION in education

Jennifer Tupper, University of Alberta

In this presentation, I argue that Instrumental rationality, which posits knowledge as objective, reduces educational, social and political issues to technical problems. A deep understanding of why particular conditions, such as poverty and social inequality, persist and what structures need to be interrogated in order to push back against these conditions is reduced by an instrumentalist approach. That is, the *why* and the *what* are reduced to *how*. In educational contexts, this translates into actions that are goal directed—for example, raising scores of marginalized students on a standardized test rather than considering the ways in which standardized tests reproduce racist and colonial systems. From an instrumental perspective “teaching becomes the management of standardized ends and means; learning becomes the consumption of prepackaged bits of information and parts of skills; and success becomes teachers and students doing as directed” (Bullough and Goldstein 1984, 146).

Sorensen (2018) argues that instrumental views of educational lead to a belief that education “can be improved by gaining a more complete mapping of the cause and effect relationships in education” (p 98). Instrumentalism refuses to consider the emancipatory possibilities of transformative education (Mezirow 1996). Rather, it produces efforts to police and modify the behaviour of students and to reduce learning to the application of narrowly defined competencies. It places emphasis on control, conformity and standardized curriculum packages (Baldwin 1987; Sorensen 2018); and it depends on standardized test scores as proof of educational success or failure, regardless of whether or not these are the socially determined aims of education (Broadfoot 2017). It requires understanding learning as an individual act, and success or failure as a product of an individual’s ability and efforts. As a consequence, educational issues become defined as technical problems, and educational reforms are directed toward improving test scores that are then compared among jurisdictions internationally

(such as PISA) and measuring the extent to which individual students meet basic competencies. In an educational system underscored by instrumentalism, there is thus no room for reconciliation/reconciliACTION in meaningful and sustained ways in schools and classrooms.

I argue that instrumentalism is a structuring force of coloniality (the acquisition of Indigenous land by settler populations and the efforts to suppress and eradicate Indigenous languages and cultures) that not only distracts us from reconciliACTION, but that erases the complex histories and identities of settler and Indigenous students. It makes little if any space for truth telling in classrooms; for reconciliation to become an ethos that permeates classrooms, curriculums, pedagogies; for shifting historical consciousness so that we might be in authentic and ethical relationship with one another. Reconciliation is not a thing to be implemented and thus narrowly measured, the results of which alert us to its success or failure. It cannot be standardized because it is contextual, emergent and fluid. Reconciliation calls for a transformation of understanding and actions in order to remediate the harms done to Indigenous peoples. As such, it requires challenges to the certainties offered by competency-based education and the continued practice of reducing individual students to test scores on standardized exams.

Instrumentalism means that teachers, school leaders and the public pay attention to test scores, reproduce deficit discourses, and largely ignore the socioeconomic conditions of children's lives that already position them in particular ways in relation to what is being measured and how it is being measured. A powerful example of instrumentalism played out in 2017 in the province of Saskatchewan, when, once again, the media reported the overall poor performance of Saskatchewan students on the international PISA exam. The teachers, their students and the educational system in the province were therefore seen to be deficient. Public concern was expressed that teachers were not preparing students to be successful in mathematics. In response, the deputy minister made the argument that the focus on the test scores was actually a distraction from the real and pervasive issue of child poverty in Saskatchewan. He advocated that collectively, the province and its citizens should be discussing and seeking solutions to poverty, especially as the majority of children living in poverty in Saskatchewan are Indigenous. Through this example, it becomes clear how instrumentalism, as a structuring force of coloniality, is not only in tension with reconciliation and social justice—it actively undermines these efforts. As long as there is continued focus on standardized test scores, the reproduction of discourses that position Indigenous learners as deficient and an overall preoccupation with narrowly defined competencies in education, then reconciliation remains an aspiration only. If we, as a Canadian society, are serious about truth and reconciliation, then we must be prepared to confront the growth of large-scale assessments and global metrics upon which instrumentalism depends. If we, as a Canadian society, are serious about truth and reconciliation, then we must be prepared to confront the growth of the large-scale assessments and global metrics upon which instrumentalism depends.

Testing is not a moral agent

Greg Thompson, Queensland University of Technology

As part of the Twin Peaks seminar, organized by the Alberta Teachers' Association, I was asked to give a 12-minute response to the following provocation: "Will the growth of large-scale assessments and global metrics distract us from a future of reconciliACTION and social justice?"

There is a particular genius at work in asking an Australian to speak to Excursion 3—commenting on the commitment to reconciliACTION and social justice in Canada—a) because this requires detailed understanding of the complex history of Canada as a postcolonial nation, and b) because of where Australia finds itself in regard to treatment of those seeking asylum, the treatment of our Indigenous Australians and too many other examples. Given this, one might well suggest I'd be better served looking after my own backyard. But because I am an academic, which necessarily means I love the sound of my own voice, I'll blunder on as is my wont.

I'd like to begin my presentation by stressing that a test is not, and can never be considered, a moral agent. This obvious statement is necessary because it is really common to see the framing of standardized tests as actors that are causing a variety of ills in our schools and classrooms. While I don't disagree that testing focuses attention in the school and classroom, and there are often undesirable consequences from that focus, I think we need to remember that ultimately it acts as a catalyst, or a surface, where what we think and believe meets what we actually desire. People have to be responsible for social justice, not tests.

I would rewrite the question to ask, "How is it that we have convinced ourselves that large-scale assessments and global metrics distract us from a future of reconciliACTION and social justice?"

So, when I started to think about the above question, I recognized that there is a very strong belief in the education community that tests and metrics stop us being the better version of ourselves that we all aspire to—better teachers, better academics, better school communities. However, it seems to me that the key words are "distract us." How is it that principals, teachers and education communities that largely share a vision of education as a common good and seek to create the best possible conditions for students to experience a holistic education become distracted?

We might equally ask, How is it that those compelling public ambitions for education—the construction of an educated, thoughtful and contributing citizenry—are meeting and being mediated by the private ambitions that have come to represent the ways that we are governed? If tests and metrics so easily distract us from these public ambitions, I do wonder at the strength of those ambitions.

For example, one way of thinking about this is through the notion of equity, itself often parsed as a social justice concern, which requires a point of comparison to judge whether or not a system is equitable. If we were to ask what the best possible use of ILSA data is, we may decide it is as a tool to

enable the measurement of equity (such as the impacts that resourcing, funding, geolocation have on student achievement). Of course, we can't really ask this question if we see these tests as powerful moral agents stopping us from doing all the good things.

The point here is that a test could add to the justice within your system (with the obvious caveat that it rarely does). And this is the interesting thing to think about: why is it that after years of testing of education systems we still struggle to translate results into meaningful policy, instead constructing narrow and hostile conversations within our systems about who is winning and losing and who is to blame?

So, my questions, intended to provoke, are as follows:

- Is the reason that we blame tests for a variety of ills because we want to be distracted from the messy business of dealing with our complex histories as postcolonial nations?
- What is this “social justice” that is so fragile, so easily distracted by the imposition of an assessment regime?
- What if everyone within the system thinks they are doing social justice in one form or another—from the politicians, to the test designers, to the media reporting on those tests, to the classroom teacher trying to make sense of the results to inform her practice—whose social justice are we talking about here?

We should stop treating tests like moral agents that can define the future. I agree with David Rutkowski's point about agency—perhaps we'd be well advised to think about what is enabled, and what we don't have to do, when we cede our agency to tests and ask whether we really breathe a sigh of relief that it is our responsibility we can explain away. The desire for a testing regime is a symptom, not a cause, and it seems to me if you better understand those individual and collective desires at work, you may understand why it is that reconciliACTION and social justice remain distractible.

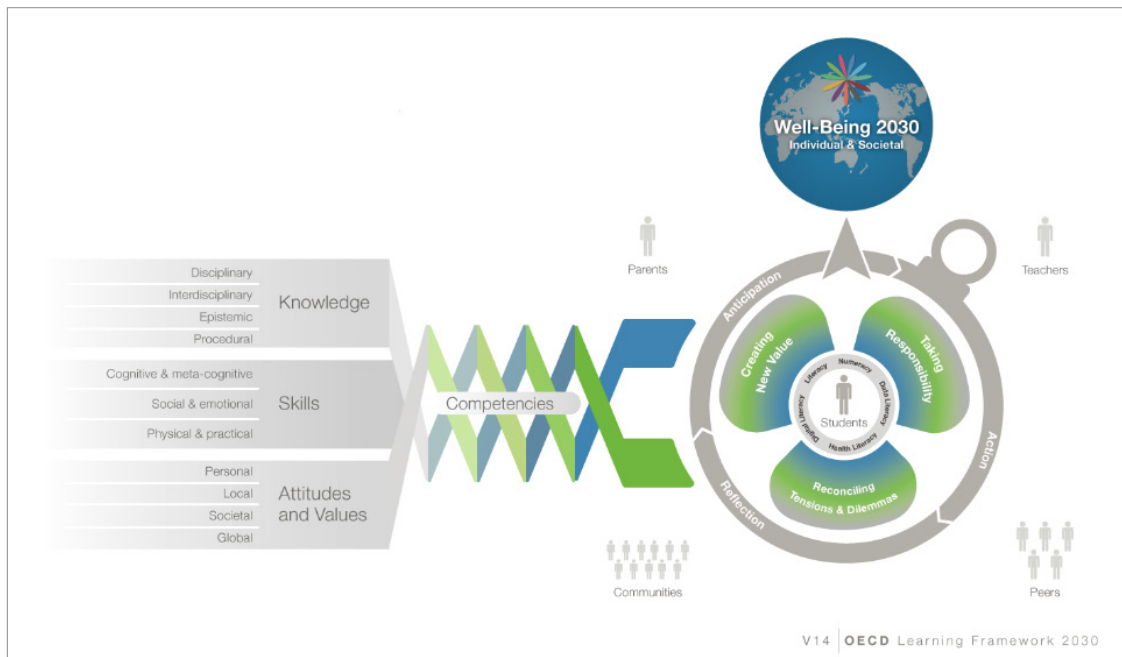
A complex curriculum for complex times

Rosemary Hipkins, New Zealand Council for Educational Research

One of the justifications for the OECD's 2030 policy is that students must be educated to be proactive responders to the volatile, uncertain, complex and ambiguous (VUCA) conditions that now prevail in our societies and in a nonhuman world that is adversely impacted by our unsustainable ways of living (OECD 2018). The challenges we face are readily evident to anyone who is looking. This means it is hard to dispute the logic of this normalising of VUCA conditions. How we respond to them, however—including what we see as necessary impacts on education of our young people—is another matter entirely (Hipkins et al 2014).

In this talk, I am going to take just one small slice of the translation challenges that greet would-be developers of national curricula. My focus is not on the neoliberal assumptions that I know others will be better placed to critique than I am. Instead, I plan to raise the challenge of weaving a coherent

curriculum from the complex pieces of the OECD’s 2030 curriculum model, with its “learner compass” that includes new “transversal competencies,” set in indeterminate relationship to the existing key competencies of the earlier DeSeCo project (OECD 2018). The latest iteration of the model is shown in the box below.



The weaving of which I speak is represented on this model by an intersecting zigzag. This constitutes what is effectively a black box between the detail of curriculum content, which is arrayed like the prongs of several forks on the left, and the compass itself, to the right of the model. How we get from one side to the other requires a complex translation process that depends on unfamiliar curriculum assumptions. If this is indeed to be a complex model for complex times, then we cannot assume that the sum will equal the addition of the parts. Different thinking about how they interrelate to become a coherent whole will be needed.

This constitutes a dilemma for the OECD, because large-scale assessments—with their menu of individual questions—arguably reinforce traditional additive curriculum thinking (ie, the pieces equal the whole). Furthermore, any complexity in the curriculum thinking that underpinned the construction of the questions is hidden behind their surface simplicity. This deceptive simplicity is a necessary precondition for fairness, allowing students in many different contexts the same chance of making the response anticipated. The fine-sounding rhetoric of the end for which this 2030 compass has been produced is at odds with its intended use.

Can we make effective use of the model in national contexts (assuming that VUCA conditions are a given)? In my talk I will make the case that this challenge can be addressed by cracking open the black

box to make processes of curriculum weaving visible and manageable for all teachers. If the overall vision is to be anything more than rhetoric, this weaving has to be achieved without glossing over the inherent complexity and variability that is necessary to responsive local curriculum building.

The weaving solutions we have been experimenting with in New Zealand (Hipkins 2017) are showing some promise. Beginning with a prototype set of “science capabilities” (Hipkins and Bull 2015), we have been exploring ways to remix key competencies and knowledge and skills in the context of rich tasks, with purposeful capability development in mind. In this talk, I will briefly outline the premises behind our new curriculum thinking and show how teachers are beginning to be supported to be, or become, more complex curriculum thinkers. (Some are already there, with the passion, knowledge and autonomy to forge different learning pathways from the norm of traditional practice.)

If we really do want our students to be proactive future-builders in complex times, then we need to begin walking the talk of our rhetoric. We need a complex curriculum (which might look deceptively simple) and teachers who are up to the challenge of complex curriculum thinking on behalf of all our young people.

Excursion Four: Are We Circling the Drain of Global Competencies, or Will We Realize the Meaning of “Public” in Public Education?

In this panel, the idea was to explore and unpack the notion of competencies (in both theory and practice) and to look at the implications of competency-based curriculum for learners, teachers, schools and communities. By looking at practice and the challenges of competency-based curriculum, we can explore the bigger issues already examined in this colloquium.

Competencies: a long, expensive, thirsty walk to a waterless well

Kent den Heyer, University of Alberta

In June 2016, Alberta’s Education Minister Eggen announced a plan to renew the province’s programs of study across all grades and subject areas within six years. All K–12 programs are to be based on a set of core competencies such as critical thinking, numeracy, literacy and managing information, among others. This plan follows those initiated by previous governments dating back to 2010. It’s a model adopted by jurisdictions worldwide since the OECD determined several decades ago that all students needed a competency-based education to meet the demands of the 21st-century economy, now some 18 years old. Alberta continues to shuffle down the well-worn road to join the “international competency order” (ICO) promulgated by what Pasi Sahlberg named as the “global educational reform movement” (GERM). What follows are several concerns I have with the ICO.

If there is nothing about which to disagree, we likely are eating pabulum

Despite vastly different locales, histories, national strengths and challenges, all must submit to the ICO as the common-sense regime (CSR) if you wish to discuss with the responsible officials how best we might meet the alleged imperatives of “21st-century learning.” I have yet to encounter someone opposed to critical thinking or managing information in schools. Within the ICO-CSR, “about what” or “for what” students should “think critically” and “manage information” (as two competencies) are never detailed. Rather, in faux-democratic fashion, these questions get shunted down the system to be answered at a later time by local teachers who already face long workweeks and crowded classrooms. Yet, here in Alberta, key measures of students’ achievement (and therefore that of teachers) remain centralized—Grade 12 diploma exams and the various other provincial learning assessments along with other international measures like TIMSS and PISA. These standardized externalities cannot but encourage teachers to stick to the safe testable content regardless of what anyone thinks needs to change to prepare kids for the 21st century.

That these measures, despite the public expense, do not provide nutritious information to help particular students in particular places is irrelevant. Whether the economy should serve education and not the other way around is now a nonsensical question. Leaders in business, politics and education now prefer the general, comparable and exchangeable rather than acknowledge the particular, singular and irreplaceable. We need to help ourselves and our government to counter the present dearth of any language, any imagination or, perhaps, any contemporary public capacity for a story whose actors are not Homo oeconomicus indulging in sophistic self-interest.

We are all sophists now

European scholar Gert Biesta distinguishes between three aims common to all public schools through time: qualification, socialization and the educational. The public quite rightly expects schools to qualify students for public participation, ranging from acquiring numeracy and literacy to specific training for a particular skill or job. Qualification thus tends to link the schooling system to economic justifications for public funding. A second and overlapping function, socialization, involves initiating students into existing dominant orders of thought and comportment, ranging from ways of speaking and behaving to disciplinary “ways of knowing” that some believe to be necessary for effective citizenship (eg, thinking like a historian or scientist). Beyond but inclusive of these two expectations for schooling everywhere and through time, we need to ask, “What is educational about education?” Like Biesta, I think this is a crucial question largely left behind in our journey into the present CSR. There are several ways to think about the educational. One is found in the Socratic example.

As Plato recounts, Socrates was an Athenian war hero without property who wandered about the city engaging all who sought understanding. He charged nothing for what may be learned as, he claimed, he had no-thing to sell. This indeed confused many, for it was well known that the Oracle of Delphi had pronounced Socrates to be the wisest Athenian alive.

Socrates premised his education on an axiom of equality: that both he and his interlocutors possessed equal capacity for “recollection” of what they already knew but had not adequately re-cognized. Therefore, each needed the other to re-think presumptions so as to possibly encounter that gap between what one thinks, what one thought, and what one can and cannot claim to know. What might be learned from Socrates was how each of us might take up a wise relationship to knowing and knowledge and the impermanence of each. This disposition is essential to the doing of any science or art.

For the sophist, in contrast, what is most worth knowing is that which serves self-interest or reinforces desires to be productively useful in and to the State. In a sophist approach, students acquire “qualification” and “socialization” by imitating the master’s version of right opinion and competency within the existing State’s order of “what counts.” Bartlett (2011) offers a most succinct set of distinctions between sophistry and a Socratic form of education: “The sophist, concerning the truth,

must be a man of perspective rather than conviction, of judgment rather than thought, of interest and not principle” (p 61).

Socrates enacted education as an inquiry consisting of what Alberta scholar David G Smith (2000) refers to as “truth seeking, truth dwelling, and truth sharing.” As I understand, then as now, truths refer not to a property, thing or final answer, but to the material remainder of thought as expressed in art, love, politics or equations born from dealing with pressing social-political and disciplinary conundrums. Biesta (2010) refers to this process as subjectification. Borrowing from the French thinker Alain Badiou (2001), for me what is educational about education is the possibility of “becoming subject” to our learning and lives premised on “the strong, simple idea that every existence can one day be seized by what happens to it and subsequently devote itself to that which is valid for all” (p 66).

Such concerns are but babble in the CSR of the ICO and for those bureaucratic functionaries who enact its logics. We all have become sophists now, as we can imagine nothing more for education than the acquiring of a set of competencies just as well learned outside as in schools so as to be productive to and in and for the present State-of-things. Preparing kids to be workers for the 21st-century economy and the emergence of life-skills programs in public schools are two of many examples of sophistry’s *raison d’être*. What is educational about education? Can’t say—we don’t even know to ask.

We are left with competencies when we abdicate our adult responsibilities to tell good stories

Since the early 1980s, we have witnessed a reshaping of the affective relationships between citizens–state–market—usually referred to as *globalization*. Along the way, many have seemed to have forgotten the need for a public to argue over the stories and questions that curriculum is, at core, about. Who do we think we are or wish to become? What diverse stories that exist on this land could we use to tell healthful stories for our youth so that we might live better together? What human do we have in mind when we educate our young? Schools, like any other community, are where we reconfigure (literally, to be with each other again) ourselves together around stories, whether explicit or not.

Competencies let adults off the hook to figure out what stories we should tell and questions we should ask that mathematics, science, literature, history can help to address. Rather, we follow 21st-century thought leaders who gather at great expense to agree with the obvious fact that numeracy and literacy are the essential bare bones of education. Innovative? When have these not been fundamental goals of public schooling forever and everywhere? As we forget the necessity to argue over what stories we will become, it also appears we have lost the satirical necessity to mock what today passes as an “innovative vision” to guide “educating for the future.”

Competencies are for poor kids—the wealthy would never accept such tripe

Under the guise of creating more economic opportunities for poorer students while meeting external standards, some schools focus less on academic content and more on basic competencies. It's as if the latter does not follow from the former in acts of truth seeking. This is not necessarily a deliberate attack on the teaching of subject content. Rather, in the case of history taught in Great Britain, rich subject content suffered in lower-socioeconomic community schools during competency reforms from what Harris and Burn describe as “collateral damage” (2011, 256).

A frequent result of this situation is that students who are the most in need for rich content are instead force-fed drill practices in the structure of an argumentative sentence. Who could be against good sentence structure? But why has it become less relevant whether the content of such nurtures the child's attempt to understand their present circumstances or that of their community and the potential becoming of each?

Meanwhile, across town, where funding and reputation are never at risk, parents, teachers and students delve into tradition-rich content as the basis to write sentences, perform plays, do art and organize food drives and, thus, further accrue the knowledge and social capital required to continue to walk forward in the well-to-do life.

To summarize, students, teachers and parents need to begin to ask questions about the political rise of the GERM's ICO CSR and its role in reinforcing existing inequities in the education quality we provide students depending on their postal code. Whatever answers we find, we should note that this regime has evidently suffocated public conversations about curriculum as a question of what stories we and our youth need to make good sense of ourselves, our academic disciplines and our social futures. We should also note the appeal of the ICO to those with power and those who serve. It functions to deny that its undergirding epistemology is a political act—a denial, which, worryingly, characterizes ideological fantasy and imperial desire.

Are we circling the drain of global competencies, or will we realize the meaning of the public in public education?

Jón Torfi Jónasson, School of Education, University of Iceland

I suggest that we are responding in this excursion to essentially two questions:

1. Are we circling the drain of global competencies? or
2. Will we realize the meaning of the public in public education?

Are we circling the drain of global competencies?

Global or 21st-century skills or competencies have been with us now for at least four or five decades. The basic idea has in fact been with us for much longer—clearly raised by Locke, Rousseau and

many others. This reflects the fact that we have known (or suspected) for a long time that in schools we are generally not doing the important things. But we cannot get to grips with what we want to replace them with, even though there have been a lot of suggestions. We also have powerful subjects and other institutions resisting change. The only thing many people know, both within and outside education, is that it should be about something else. A good example of this is the recent well-being rhetoric, but also other OECD escapades.

There have been various attempts at specifying or defining all kinds of competencies or emphasis, but there are essentially three problems with all these endeavours:

- We do not really know what to list (the least of the problems), and the various lists are varied and sometimes long (and quite different—which is not a problem).
- We do not know how to narrowly define any of the competencies, and thus how to assess them, neither in the short nor the long term (this problem is largely independent of whether we are for assessment).
- We have no (little?) idea how to cultivate these, and we do not seriously address this in our ITE nor even in CPD. (This and the other statements are general ones—there exist interesting exceptions.)

Thus, the problem is not getting any worse, but it is staring us more clearly in the face and more people are gradually realizing its essence and seriousness.

Will we realize the meaning of the public in public education?

This is the other part of the problem, and closely related to the first part. This is not getting any worse, but is starting to bother “us” more, because it is really starting to hurt education in schools.

This problem is essentially that we do not know how to talk about education. We address neither what education is for nor, following on from that, what should be its ingredients, nor how it should be conducted. And we do not know on which grounds we should base our discourse (science, philosophy, the economy ...). And we, within the discipline of education, are largely to blame for this. We do not talk in a language that is understood among either the public or ourselves (we come from many very different cultural traditions) and thus we cannot compete with the PISA-type rhetoric.

(An example of the difficulty: at NERA [Nordic Educational Research Association], in Oslo in March, I took part in a panel discussion where the core question was, Is pedagogy a part of educational science or vice versa? To me, pedagogy—education—is, obviously, in many respects, different from educational science—but again ...)

In Iceland, the public discourse has changed in the last century and a half, also with ambitious new curricula. But the popular discourse is in many ways strangely similar to what it was in a very different world when the system was being moulded and four years of schooling expected.

But now, most young people go to school for 16 to 18 years (and many much longer), and each school year is much longer than it was a century ago, and the world has changed dramatically and will continue to do so. The discourse is certainly not reflecting these changes.

I note six reasons why the “public” in education needs to retain its traditional stature.

1. Education is meant to cultivate a community, at the local and the global level; thus, a public, dynamic community is an important goal.
2. Education is a communal endeavour; its nature demands that it take place within a community of students and teachers; it is meant to cultivate a sense of community and learning to live with other people; it is a cultural endeavour, not a technical one.
3. The complex essence of education repudiates its commodification; it needs to resist being transformed into commodifiable units or tasks (through, for example, tests, objectives, and/or standardization in content and material). It is thus necessarily a public exercise. (But of course, education is a commodity—we have the credential currency, perhaps the crecoin (creditcoin)—similar to bitcoin!).
4. In order to retain (or regain) its strength and dynamism, education has to cultivate the engagement with and of its environment—parents, industry, various voluntary and official bodies; it thus has to be a truly public endeavour.
5. Situating education within the public arena is a major factor in ensuring the equity within education, which is perhaps its most important feature.
6. Education is at the core of developing and sustaining a democratic society. It needs to be an integral part of our democratic system and culture—it cannot be outsourced and still retain its place.

I think our main task is to discover and realize the meaning of education within education, and there are several dimensions that should be attended to. One of the most important issues is, How do we genuinely involve the young people (students) in the process?

So, we may ask, what is the problem for education?

Is it a down-spiralling economy, neoliberal ideology, commodification, testing regimes, standards, big or small data, competition or comparison, unfathomable futures, urbanization, multicultural settings, automatization, new competencies, neuroplasticity, artificial intelligence?

No—perhaps none of these represents the fundamental or underlying problem, even though all of these present challenges that deserve and receive attention.

The main problem is that we shy away from deliberating and redefining education as our main focus and task. Many people accept that, yes, this is a difficulty, but then they do not turn to address it but turn their attention to other pressing but more manageable issues to discuss.

And therefore (and I find it mind-boggling), in education we go right ahead to talking about standards, quality, good schools, excellent education, best practices, good teaching and so on and so on—as if we had reached an agreement on what is the essence of education.

Traditionally, and obstinately, we continue to make serious and obvious mistakes, as I have partly implied already, by

- introducing (important) skills or competencies that very few know what they mean, and hardly anybody knows how to cultivate or measure (creativity, communication, critical thinking, entrepreneurship, virtues of various sorts—an endless list ...). The problem is that we need to do this, but we must acknowledge the difficulties. Also, we must address transferability (the transfer-of-training issue) and thus the importance of context, both of which are of paramount importance and are practically always ignored;
- preparing teachers in ITE to do things that are, at best, not a priority for their students and communities—and not preparing them to understand and do things that might be a priority; and
- not encouraging teachers to do what many of them know makes sense and is truly educational—sensed by them even without an elaborated definition.

The academia, the professional unions and governments have to look critically at themselves and discuss what should be their role in addressing those issues. We?—or they?—are mostly not doing it.

Are we circling the drain of global competencies, or will we realize the meaning of the public in public education?

Peter Hopwood, Donovan Primary School, New Zealand

Tena kotou, tena kotou, tena kotou katoa.

Greetings to you all.

My name is Peter Hopwood and I am from the most southern city in New Zealand, Invercargill. I am a principal of a Year 1–6 contributing primary school. Currently I chair the Principals Council of NZEI, the New Zealand Educational Institute, one of the largest unions in New Zealand.

Ko te ahurei o te tamaiti o tatou mahi.

Let the uniqueness of the child guide our work.

To understand the question “Are we circling the drain of global competencies or will we realize the meaning of public in public education?” you need to know a little of our context. New Zealand has a curriculum that spans Years 1 to 13, the same curriculum across our entire country, including Integrated, private and schools of special character. Our curriculum encompasses

- the arts,
- English,
- mathematics,
- science,
- social sciences,
- technology,
- health and physical education, and
- learning languages.

You need to understand that in New Zealand we are self-managing schools with a group of parent-elected governors or trustees. We report to the Ministry of Education on finance, achievement and property. But we deliver the curriculum through our own school policies and school-developed curriculum delivery frameworks. I know it sounds great, doesn't it? Just wait—there is a twist coming.

Our curriculum is led and driven by a vision, principles, key competencies and values that are incredible and aspirational and have every chance of creating great global citizens and lifelong learners.

Our curriculum was truly going to fill the learner's bucket with skills, knowledge and attitudes guided or underpinned by values and competencies.

Then the twist. Less than two years after great consultation with the teachers of New Zealand to create this world-leading curriculum, the government changed and brought in a policy called "National Standards." I use the term with reserve because they were neither national nor standards. They were not truly consulted on, or even trialled or tested. They were just imposed on top of the New Zealand curriculum, so back to the question. It created a drain hole in the bucket we were excited about filling. The policy changed schools and education to an extent we had not seen for decades. The policy started to infiltrate our *Education Act*, our funding, how professional development was provided for schools. The curriculum narrowed because the National Standards were just for reading, writing and maths. They were the only priority; school data around how the children were doing against these untriated standards was made public. Schools were now judged by these nonstandard measures. The competencies—self-management; thinking; participating and contributing; using language, symbols and text; relating to others—were fast fading in importance. Our world-leading curriculum was at risk of heading down the drain.

As a disobedient teacher, I struggled with the policy; as a disobedient principal, I really struggled with the policy.

Our public education system was becoming government led, not research led or led from within the profession by education experts.

As an education union, we tried to stop it, fight it, change it, with little to no impact on the policy.

So, we were circling the drain, and the public voice and needs were disappearing from our public education system.

It has been a dark time for schools in New Zealand. Our children were starting to miss out on the richness that was intended in the New Zealand curriculum and have started to see themselves only as *Above, At, Below* or *Well Below*.

They were not seeing themselves as learners who needed the key competencies to evolve into truly global citizens.

Nine long years the policy stayed, and the drain only seemed to become bigger. During this time, a new generation of teachers and principals entered the profession so therefore knew nothing before National Standards. So were we now creating narrow teachers to deliver a narrow curriculum—teachers that prioritized acceleration of achievement in reading, writing and maths and used less time, energy and passion for the other rich learning areas?

Sadly ... yes.

Six months ago, we had a change of government. Our new government campaigned to remove National Standards and, true to their policy, they did. So, what now? We started grabbing plugs to put in that drain.

Where is the New Zealand curriculum today? It is still there, just hidden and overshadowed by the policy. We now have an opportunity to create school/community-based curriculum frameworks that are based on true consultation and a responsive lens for our learners.

How will this look for schools in New Zealand? We need to relaunch the New Zealand curriculum and work on exciting professional development for teachers to put a balanced curriculum into New Zealand Primary Schools. I call it “back to the future.”

What are the lessons for us to have a genuine public education system that is formed on equity and excellence?

1. Have a unified vision for education.
2. Know the principles that will guide your decision making on your journey toward your vision.
3. Have and know what key competencies will be needed by the learner to continue lifelong learning.
4. If policy change doesn't look like 1, 2 or 3, then speak up. Remember who the experts are.
5. The whole fabric of our society in the near future depends on the citizens we are creating in our classrooms today.

It is too important to think it is other people's work; it is our work in the classrooms and schools. We are the only ones who can stop competencies disappearing down the drain of education.

Building public confidence and the alchemy of standards—the big questions for system and political leaders in the next five years

David King, Consultant, British Columbia

My interest in education is a citizen's interest, concentrating on *public* education as the cultural institution and process by which my community decides, from time to time, what is the essence of our community, and then works, very deliberately, to convey that essence to our children. I think of the essence of community, the work of public education, as including values, form, process and content.

Public education is the only (more or less) powerful and universal process by which we can draw students into an understanding of, and a commitment to, life in a civil democratic society. In other words, public education is all about character and relationships.

It is sometimes said that we design our buildings and thereafter, our buildings design us. The same can be said of public education. We create a model of what we want, and our model creates us. Sometimes, however, model building involves the unconscious adoption of many assumptions, without examination. Or sometimes the assumptions that were once valued, explicitly acknowledged and wrestled with get lost sight of, become implicit, and are no longer valued or wrestled with. What happens when we discover, probably in a deep crisis, that the old model is essentially a completely unreliable map for the wholly new territory we have wandered into, unaware?

Some of you know that I am fond of quoting Vaclav Havel, who said, "Today, many things indicate that we are going through a transitional period, when it seems that something is on the way out and something else is painfully being born. It is as if something is crumbling, decaying, and exhausting itself—while something else, still indistinct, is rising from the rubble."

We are asked to focus on the next five years. The project that sparks my interest is of longer term, but we need to take up the project now.

I offer four thoughts.

The first is that our model of self-governance is subsidiarity, not democracy. One great turning that we must make is away from subsidiarity and toward democracy.

Three thoughts derive from that.

My second thought is that the postindustrial world is not going to be more humane—it may briefly be less humane—until it turns from neoliberalism to something new that is being born; something that will reject the trajectory of industrialism and neoliberalism.

My third thought is that we who are concerned about education should never submit to big data. At the very least, we should refuse to use the term in the context of public education, except perhaps as an expletive.

For those of us who believe in humane education, big data poses a number of problems, at every level, from the philosophical to the operational.

The ultimate goal of big data is to understand the flow of data points so as to constrain the flow of data points, going forward. This is neither life giving nor freedom enhancing. Consider a software application such as Class Dojo, which is intended to track student behaviour, in real time, so as to condition the student's future behaviour. Among many salient omissions from the design of the software is the realization that behaviour is communication, and the behaviour needs to be responded to, not with an emoticon or other kind of sanction, but with a “why?”

Basically, big data is an “odds maker,” completely unconcerned about the consequences of any bet on the bettor (the student). Like an odds maker, big data is concerned only that the house make money. Ministries that are obsessed with “ranking up” are not concerned about how any individual student is doing, or what the lifelong consequences are going to be for any student: they are concerned that the house make money on the bet—do well compared with Finland.

My fourth thought is that big data depends upon massive amounts of data from as many different sources as possible. (Google processes about 24,000 terabytes of data daily.) To the extent that the public education system buys into big data, it will be as a needy provider, not as a controller. The reason commercial ventures encourage the participation of public education in big data schemes is not so that big data can contribute, but so that it can extract.

T S Eliot, in “Choruses from The Rock,” once asked, “Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?” To which we might add, “And where is the information we have lost in data?”

In Response: Reflections from Australian, Iceland, Norwegian and Alberta Teacher Professional Bodies

Kevin Bates, President, Queensland Teachers' Union

This is my brief presentation in response to panels 1 and 2, with suggested actions for teacher organizations:

- The fundamental issue we are exploring here goes to the question of the purpose of education—the lived experience of teachers and leaders suggests that assessment controlled outside of the classroom, that which is not teacher directed and teacher controlled, should be rejected. By its nature, this assessment is contrary to the purpose of public education. Control of international assessments is an illusion; the control lies with external organizations, including political operatives, with objectives largely parallel or contrary to those of public education.
- Public-sector employees are bound by increasingly draconian regulations designed to reduce our voice and agency. Teacher unions are among the last bastions of political power, outside of the political machines, as elements of our civil society—and feared as a consequence.
- There is increasing control of associated educational faculties by external parties, including nongovernment, for-profit corporations—curriculum, assessment, professional practice.
- The fundamental mismatch between the concept of personalized learning and the political imperative for standardized learning to facilitate measurement for public comparison of public schools results in impersonalized learning.
- In the Australian context, true motivation is revealed by the lack of imperative from government to subject private government-funded education to the same scrutiny—this manifests itself through unequal public funding for all schools and a framework of unequal regulation.
- Teachers unions can and should promote assertive professionalism, push back against misuse of public education and standardized testing—embrace natural alliances with students and parents to force political change.
- The scourge of workload—it has become a tool to diminish the capacity of teachers and leaders to mobilize to capitalize on our professional capacity to influence debate about education, to use the collective voice to act as the loudspeaker for our views. We are overwhelmed with work, which is not about students but all about education policy designed by governments.
- I reject the notion that there is something wrong with our education system—point me to any system that is perfect, which operates free from perverting influences only for the benefit of stakeholders. The teaching process and school leadership have always been about an ephemeral process that can and should be in a state of constant change to be focused on the needs of

students. If we get that right, then social benefits—the public good—naturally flow. The focus of government on fault in the education system is about obfuscation, about the originators of education policy settings denying responsibility for the outcomes that their decisions have wrought.

- We can and should act to keep public education focused on the public good. The future is not inevitable; we can and should empower students to shape it for their benefit and our own. We can change the rules! We can and must act to protect students from the ongoing deterioration of our education system, an outcome being designed and implemented for decades by neoliberal governments. We have the capacity—we must now exercise the will to bring about real change.
- The education agenda is ours to set—professional control, professional autonomy, professional representation through our collective voice.

Ólafur Loftsson, Icelandic Teachers' Union

Historically, teachers in Iceland have not been treated by government as professionally autonomous—we have had a very top-down, managerial system. For example, the decision to participate in PISA was imposed with no substantive discussion or engagement with the profession. Many other similar decisions were made by politicians and management without the true voice of the profession being heard, except in protest.

But this is changing. Over the last few years, we have been working to strengthen the professional identity of teachers and teaching and to explore the role of teachers in making decisions at the level of the school and the system about what should be taught, how it should be taught and what resources are needed to teach. We are, as an organization, moving beyond bargaining as our core role to include a focus on professional learning, system decision making and building the professional capability and capacity of teachers. It will be a long journey, helped by our partnership with Alberta Teachers' Association and our growing involvement in activities that broaden our understanding of the potential role of such an organization as ours.

Our current strong focus is to find channels and routes for the voices of teachers to be heard—to engage our members in inspired conversations about their work, their role as professionals and their opportunities to make a difference. We are learning as we go, but we are resilient and adaptive.

The key to our professional future is building this capacity for engagement. Events like uLead, Twin Peaks and More Than Your Evidence connect our teachers with others from around the world that have a long history of having their voices heard—we can learn from them. We are also publishing resources that help our teachers explore the space between practice and policy, such as the Icelandic version of *The Global Education Race: Taking the Measure of PISA and International Testing* by Sam Sellar, Greg Thompson and David Rutkowski.

We are engaged in a change journey—these conversations and dialogues all help.

Roar Grøttvik, Union of Education, Norway

First, let us understand the forces we are working against:

- What do we mean when we say that education is a complex endeavour? Is it logical that the results of teaching and learning in education can be portrayed as simple figures on a scale?
- The digital portrayal of students' educational results on scales is the basic foundation for "What works research" (quantitative research based on the data sets described earlier today) and the development of administrative and teaching programs that take away or diminish teachers' ability to use sound professional judgment taking into consideration the students they are responsible for and the actual circumstances they are working in.
- Teachers' long-standing compliance with the old sorting role of education using grades is now coming back as a boomerang, paving the way for the kind of developments that are described in the invitation to this seminar.
- OECD's plans to measure social and emotional on scales the same way as they have been measuring cognitive competences through PISA and PIAAC will only make matters worse. It will be harder on students to receive feedback on something that for them will be hard to distinguish from personality traits as figures on a scale and that are highly comparable on the individual level. The measurements will be of limited policy relevance because of low predictive validity and reliability. There is a great danger that if the OECD is able to convince enough countries to go down this road, these kinds of measurements will probably also be developed and included in tests at the jurisdiction level.

What can professional unions do?

- In several countries, both the government and unions are right now working to change curricula to foster "deep learning" instead of superficial learning caused by overburdened curricula. The "deep learning" concept is difficult to grasp, but in the Norwegian context it means that subject curricula should include only the basic concepts and methods that define the subject. And, in addition to the subject curricula, three cross-curricula themes will be developed. In practice, many schools have also introduced theme- and project-based learning, in which different aims from different subject curricula are covered.
- Even if some of these changes are promising, our research-based experiences of using change of curricula to foster fundamental changes in education are not very promising. The old joke that "there is no curriculum reform I cannot adapt to my way of teaching" is still relevant.
- Teachers' general experience is that changes in the assessment systems tend to have much larger impact than changes in the curriculum. It has been a general problem in my country that the profession's influence and participation in changes of the assessment systems have been much more limited than in curriculum changes. This was the case when national student testing was introduced in 2003, in the aftermath of the 2000 PISA results. The tests were introduced despite strong opposition from students and teachers.

- A promising development in a few of our schools at the moment is that they will stop using grades in the formative parts of their assessments. Even if this does not stop the use of grades and points in the summative assessments, the fact that teachers and school leaders are becoming more aware of the detrimental effects on learning and the portrayal of learning and education is positive.
- I think the professional unions need to support a development where assessment for learning plays a much more important role than giving assessment information to governments in a form that can be used for the purpose of ranking students—information that later is misused and over-interpreted to rank teachers and schools by administrators, politicians and the press.
- The researcher Yong Zhao has written a wonderful article about educational research, which, unlike research in the medical profession, is not concerned about possible side effects of interventions and reforms based on “what works” and simple correlations. This is, of course, a rather harsh critique of much of the quantitative educational research that has influenced education policies over the last couple of decades. But it is also a clear message to professional unions and their involvement in education research in the years to come.
- So, in all this, which might be perceived as general bleakness, there are also glimpses of hope, even in Norway. Just a couple of days ago, three parties in the Norwegian parliament put forward a proposition that they have labelled “A Reform of Trust in Norwegian Education.” The general idea is that instead of burdening the teaching profession and school with a lot of top-down interventions of methods, materials, organization and assessment, the profession should be trusted to take a lot more decisions about their daily work.
- There have been weak signs for two to three years now that politicians have understood that micromanagement inspired by New Public Management ideology, especially through different assessment tools, has not produced the results they have aspired to.
- The proposition will come up for debate and decision before the summer, and there is good hope that a majority in parliament will support it. So, just maybe, this is the beginning of a beginning, of change in the right direction. If so, it will be an inspiring but huge challenge for us, the representatives of the profession.
- It will mean that we must take on a much larger responsibility for developments on the ground level, but also higher up in the system. To express what we are opposed to will be far from enough. It will fall on us to come up with the good solutions and the good propositions to hard questions, like:
 - o How do we develop a strong professional collective that can ensure and take responsibility for the quality of professional decisions in schools?
 - o What kind of assessment system do we need that can satisfy students’, teachers’ and governments’ needs and, at the same time, take into consideration the complex nature of education?
 - o How do we organize schools to play the role as community hub for services and cultural life?
 - o And a lot of other hard questions.

- Twin Peaks and other expressions of international cooperation and networks inside the profession are obviously part of the answer. We just need more, not less, cooperation. We need to think and learn together. So, thank you to ATA, and especially J-C Couture, for organizing these events.

Greg Jeffery, Alberta Teachers' Association

As we look to the future, we see the profession challenged in terms of classroom complexity, conditions of practice and the demands for outdated forms of accountability. We also see the profession and public education under repeated attack from those whose agenda is not focused on the needs of students or community, but on perceived short-term political gains that will benefit a select few.

In Canada, democratic control of education at the community level is being diminished by growing efforts to hold schools to account based on metrics that are increasingly narrow and that do not represent the enduring work of teaching and learning. The right of professional associations to engage in free and open collective bargaining is also under threat. The opportunity to invest in professional development driven by professional needs is a part of this process. These pressures come from those who champion the global education reform movement and from publishers, technology vendors and others. Today we have heard that these pressures will become more pronounced when we consider the implications of artificial intelligence and the misuse of neuroplasticity-based education.

Countering these pressures and future forces, here in this province, the Alberta Teachers' Association has worked diligently to secure a set of professional standards for teachers, school leaders and superintendents that reflects the best of professional practice. We are working hard at ensuring that the curriculum development now taking place in Alberta is driven largely by teachers and not by the OECD's human capital model of educational development. Through our advocacy effort, including collective bargaining, we are working hard to ensure that conditions of practice will enable Alberta to continue to be among the best education systems in the world. Finally, we continue to sustain and enhance international partnerships with schools, researchers and like-minded organizations that we began seven years ago with Finland and that now has grown to include Norway, New Zealand and Iceland.

As the panellists have demonstrated, we cannot be complacent. We have to invest in and build the profession's capacity and capability to be resilient, courageous champions of learning and engaged advocates for the future of the profession. In this regard, while bargaining for conditions of practice is important, the profession must strengthen its position of trust with the public in society. This trust, which remains strong among Albertans, is constantly under threat. Here at home and with our international networks, we need to continue to engage the public in an understanding of the value of public education and the work of teachers in enabling quality education and a great school for all.

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