Education Funding Model

A Brief to the

BC Education Funding Model Review

from the

British Columbia Teachers’ Federation

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President

Executive Director
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Teachers welcome the British Columbia government’s review of the funding formula for public education. While inevitably suffused with technicalities, this exercise is fundamentally an opportunity to ensure that our schools and our classrooms reflect both the needs of our students and, more broadly, our values as a society. It is a chance to ensure that every student in every school is given the opportunity to reach their full potential.

Long overdue, this review is an occasion to look at funding for public education holistically. Doing so means answering the important question of how provincial funds are shared between local school districts, while paying attention to the inseparable issue of whether total outlays are sufficient to sustain the education system we want and the one our students need. A new funding model should reflect three over-arching priorities for funding our public education system. Funding must be:

1. adequate and based on need
2. equitable and inclusive
3. comprehensive

Needs-based and adequate funding

Adequate funding must be a foundation of any new funding model, not an afterthought. There is no magic that can be wrought by a formula or model that distributes an insufficient total pool of funds around our provincial education system. In fact, every discussion of a funding model is implicitly also a discussion of the total resources devoted to education.

TEACHER VOICES

“Students know what the adults in their society think of the importance of their education by looking at the resources they are given for their schooling.”

Recent, empirically sophisticated research shows a clear link between increased funding of public education and better educational and social outcomes far into adulthood. Using large national US datasets spanning decades and innovative statistical techniques, a study published in 2015 by the National Bureau of Economic Research found that “a 10 percent increase in per-pupil spending each year for all twelve years of public school leads to 0.27 more completed years of education, 7.25 percent
higher wages and a 3.67 percentage-point reduction in the annual incidence of adult poverty” (Jackson, Johnson, Persico 2015). These effects are even larger for children from low-income families, for whom a similar, persistent 10 percent increase in funding is associated with 0.43 more completed years of education, 9.5 percent higher wages, and a 6.8 percent reduction in the annual incidence of adult poverty.

Previous studies questioning the relationship between increased funding and student outcomes failed to account for the myriad ways in which changes in funding and changes in student outcomes often vary together (for example, a school’s neighbourhood becoming poorer can lead to both higher funding and worse educational outcomes, although there is no causal link between the two). While adequately funding public education should be a principle of social justice and social fairness, the authors conclude that it is also an economically sound investment. Just looking at the impact of adequate funding on producing higher future wages for students, “[its] internal rate of return is…larger than long-term returns to stocks” (ibid.).

Even the Organisation for Economic Co-operation and Development (OECD), frequently a voice for increased “efficiencies” in public education, adds its voice to those emphasizing adequacy of the total funding envelope. Its 2017 report on school funding titled The Funding of School Education: Connecting Resources and Learning states, “The overall level of investment in education is an important precondition to ensure the quality of education provision.” The adequacy of funding must have its place alongside other principles like equity, comprehensiveness, transparency, and predictability.

Other jurisdictions have embraced the fact that meeting the needs of students requires additional resources and have integrated funding increases into formula reform initiatives. The same OECD report highlights how the Flemish community in Belgium made changes to their system of allocating operating and staffing grants alongside “substantial increases in the overall budget” (OECD 2017). Adequacy of total funding was also a central concern in Australia. There, an education-funding model review carried out by a panel led by David Gonski was clear that the amount of funding had to be taken into consideration. In fact, adequacy of total funding for public education was one of the principles of the review: “Funding from all sources should be sufficient to ensure that all Australian students have the opportunity to receive a high standard of schooling” (Gonski 2011). The final report coming out of the Gonski review called for an approximately 15% increase in total funding to the national education system, noting, “the additional investment needed to implement a schooling resource standard is necessary because, without it, the high cost of poor educational outcomes will become an even greater drag on Australia’s social and economic development in the future” (ibid.).
RECOMMENDATION 1: The adequacy of total funding for public education should be a central focus of the funding model review.

What does adequate funding mean more concretely and how does it relate to the design of a funding model? In short, funding must be responsive and proportional to the real, identified needs experienced by schools and school districts. For many years, the Standing Committee on Finance and Government Services has included a version of this recommendation in its final reports to the provincial legislature: “With broad stakeholder input, review the per-pupil funding formula to develop a new needs-based, stable and sustainable model to fund actual costs, resource needs, and professional development requirements of each school district.” (Select Standing Committee on Finance and Government Services 2017, emphasis added)

Strikingly, the communication the BCTF has received from Ministry of Education officials is missing the key adjective “needs-based” when describing the desired outcome formula. Yet this condition is key to ensuring that any new funding model drafted at the provincial level aligns with the reality of maintaining successful schools in local school districts.

Districts and schools face a variety of costs. While some vary with enrollment, others are relatively fixed and vary little. For example, it costs roughly the same amount to heat a school attended by 300 students as it does to heat one attended by 270. The same holds for electricity use. And these must be borne whether the price of electricity or natural gas stays relatively constant or increases. Similarly, the complement of teachers will not adjust proportionately to student enrollment. If class-size ratios are to remain with acceptable bounds—a factor that should be explicit in the funding model—modest drops in enrollment will not lead to fewer teachers, both classroom and specialist.

Needs-based funding reduces the risk for unfunded cost pressures, a phenomenon endemic in recent years. Based on BCTF calculations, school districts faced additional, unfunded costs of close to $94 million in the 2016–17 school year, including MSP premiums, inflation to supplies, funding for the Next Generation Network, and provincially negotiated agreements.

British Columbia’s new funding model should be explicit about broad categories of readily identified needs and the cost of the resources to fulfill them. In particular, the level of government responsible for negotiating labour compensation costs—through provincial collective bargaining with unions in the education sector—and setting central policy objectives should also be the level of government responsible for transparently allocating sufficient funding to cover these major categories of expense. The same provincial government that signs collective agreements with mandated compensation
increases or introduces new provincial initiatives, such as wholesale curriculum change, must be prepared to fully cover their costs, even if it is school districts that ultimately pay the bills and salaries.

**RECOMMENDATION 2:** The new funding formula must include specific provisions for funding the costs of provincially bargained collective agreements. In the case of teachers, this should include both changes to compensation as well as any other bargained language that has clear cost implications.

There are ample precedents for funding models more responsive to needs than the current formula used in British Columbia—one where nearly 80% of funding is distributed via a largely undifferentiated per-FTE-student amount.

In fact, the previous iteration of British Columbia’s funding formula, in place prior to 2002, utilized a broader set of indicators more reflective of actual school needs to set district funding amounts. While some indicators were based on full-time equivalent (FTE) student numbers, others were based on an FTE school or even (as with some maintenance and utility needs) on school floor area. Some program areas like career planning or categories of resource like computers were given independent formula amounts.

Other Canadian provinces also assign more weight to identified needs in their funding formulas. In Manitoba, for example, funding for operations and maintenance depends on school age and size, while funding for transportation depends on the distances covered by bus routes. Even within base per-pupil funding, items like curricular materials, library services, and information technology feature independently. Even Ontario, a province that also leans heavily on a per-pupil funding amounts in its funding formula, utilizes sub-formulas with reference to needs (including classroom assistants, teacher-librarians, supplies, and computers) to calculate these per-pupil amounts.

In essence, a funding model aligned with identified needs creates a baseline measure: an abstract picture of an adequately resourced, successful school that can serve as a minimum acceptable standard from which formula categories are drawn and modified to account for local challenges. This method has been considered in similar exercises in other jurisdictions.

In discussing the major components of needs-based formulas, the OECD also cautions against oversimplification: “A formula may contain a number of different units…School size is an important determinant of unit cost. Fixed costs (e.g. school leadership, premises, providing a selection of subjects) do not diminish with the number of students” (OECD 2017). Schools need stable and predictable funding that also keeps pace with the changing costs—and this is much easier when major resource needs are identified and accounted for in the funding model.
RECOMMENDATION 3: Identified needs should be central to the new funding model.

Without clear mechanisms that transparently relate funding amounts to genuine needs of districts and schools, it is easy for a formula to create pressures for austerity—“efficiencies” gained at the expense of students. British Columbia is not the only province where such pressures exist; a recent report from Ontario authored by economist Hugh MacKenzie notes that “the most important consequence flowing from the separation of funding from identified needs is that it has forced a shift in focus at the local level from meeting the special education needs of students to rationing a fixed allocation of funding from the provincial government” (MacKenzie 2017).

The formula used in British Columbia has played precisely this role in recent years. Insufficient funding stemming from the per-student-centered formula has not only created the conditions for, but also enforced, painful cuts to programs, facilities, and staff. School districts, bound by balanced budgets, have had no choice but to leave classrooms under-resourced, whether this means staff, materials, technology, or all of the above. While seemingly providing for a high level of local autonomy on the part of school districts, the funding formula has in fact constrained the range of action open to school boards and district administrators.

TEACHER VOICES

“Rooms used for computer labs, learning assistance, home economics have been repurposed to classrooms.”

“Two years ago, our district turned away five families (multiple children in many of them) because every school was at capacity and there was no room for any more students. These families went to private schools.”

The structure of the current formula is closely related to, and enables, chronic underfunding. It is all too easy for the province to download responsibility for meeting new or escalating system-wide costs to school districts. Over-reliance on a per-student amount (under the current formula, 79% of operating grants are allocated via a basic per-FTE-student amount) enables and even encourages austerity budgeting. The OECD recognizes this fact: “A per student funding allocation can impose greater fiscal discipline.” (OECD 2017)

Such discipline in British Columbia’s public education system has meant, for example, that the number of FTE library specialist teachers dropped by 39% between 2001–02 and 2015–16. Numbers of FTE specialist teachers in special education and English language learning also dropped by over 20% each.
Spending by school districts on supplies decreased by $62 million in inflation-adjusted terms between just 2007–08 and 2015–16—from 4.96% of total to 3.66% spending.

Over-reliance on a very large, undifferentiated per-pupil amount may have been an ideological move: this type of funding mimics what would happen under a voucher, “school choice” system—it over-emphasizes a fictional abstract equality above the concrete, varied circumstances facing students across the province. Coupled with the ability for parents to send their children to schools outside of their neighbourhoods or communities, the current model exacerbates pre-existing inequalities and facilitates drains on resources. It effectively enforces anti-egalitarianism on parents and students.

Indeed, in some Swedish municipalities a very simplistic formula system has devolved into something like a voucher system, the first step on the road to the privatization of K–12 education. In her comparative study of funding formulas, Rosalind Levacic, one of the foremost experts on funding formula design, describes one Swedish municipality, Nacka: “Since 1992 [Nacka] has operated a quasi-voucher system of parental choice of school…Revenue from the voucher has to cover all the school’s costs including capital works” (Levacic 2008). A very simple formula has been an aid in transforming education into an object of consumer choice rather than a form of social provisioning and solidarity.

In British Columbia, despite increases every few years, the per-FTE-student formula amounts have frequently stagnated in real terms, all the while costs have grown, both because of annual inflation and more specific cost increases. Indeed, both the formula amounts and the amount of total operating grants per-FTE student were flat or decreasing in real terms over six years up to 2017–18. This year, the reinstatement of class-size and composition language into the BCTF collective agreement by the Supreme Court of Canada, has led to a real increase in total operating grants per student as the government was legally mandated to increase teacher complement.
RECOMMENDATION 4: Formula amounts should be automatically adjusted to, at minimum, keep pace with inflation and any other contractually agreed upon increases.

Another major cause of the current funding pressures and enforced austerity is that the total envelope of operating grants has not kept pace with GDP growth. As previously noted, operating grants per FTE student have barely kept pace with inflation. A falling share of education spending in GDP, in effect, says that we, as a society, have put a declining value on education.

Recent funding statistics are not encouraging. If operating grants per FTE student, even after the implementation of the Memorandum of Agreement between the BCTF and the provincial government and its associated Classroom Enhancement Fund, accounted for the same proportion of GDP as they did in 2001–02, they would be 37% higher today. Even making an allowance for declining enrollment—
which, as noted, only decreases some costs, as many are relatively fixed regardless of how many students are enrolled—leaves a gap of nearly 30%.

Figure 2. Counterfactual changes in operating grants per FTE student based on a stable share of GDP going toward public education. Data drawn from Ministry of Education Operating Grant Tables, Statistics Canada and BC budget estimates.

Introducing a model based on identified needs makes it more difficult for a formula to have such coercive force on necessary school and classroom resources. Needs-based funding allows for planning and forward thinking where energy can be focused on what is good and can be improved in a district, not where cuts will be least harmful.

**TEACHER VOICES**

“BC schools are using the same textbooks that I used as a student and I graduated in 1989!”

“Competition for scarce resources has caused conflict between colleagues and departments.”

An attention to identified needs creates space for greater transparency and accountability in how provincial operating funds for public education are distributed. Today, transparency is greatly
diminished when the vast bulk of funding, approximately four-fifths, is provided to districts via one large per-FTE-student-based grant. A needs-based model will more easily enable teachers, parents, school administrators, or any interested British Columbian to get an insight into how education is funded—how education priorities and values align with resourcing.

**RECOMMENDATION 5:** The new funding model should be more transparent, increasing accountability for Ministry staff and making judgements of how resources align with public education priorities easier for all British Columbians.

Chronic underfunding changes values. Public education decision-making starts to revolve around which costs can be cut rather than how best to fulfill children’s learning needs. Parents, teachers, and students should not be held hostage by underfunding. We as a society can choose to make public education a more central part of our economy, effectively halting its declining importance and restoring its potential.

While the new funding formula covers only operating grants, it must be noted that adequacy also means adequate capital funding. Students need safe schools and enough schools in growing communities. The Ministry should implement a similar review of capital spending to ensure that school building keeps up with new enrollments and that seismic upgrades are carried out as quickly as possible.

Determining needs and how they are to be adequately filled is not easy, but that is very different than saying that it is impossible. This review and the new funding model it produces are a chance to make up for many lost years of chronic underfunding, to realign resources with the public education system’s needs and mission.

**Equitable and inclusive funding**

It is, however, not enough for there to simply be enough. If funding is to be adequate and in line with identified needs, we must also ask, whose needs? Funding must abide by the principles of equity and inclusion. This includes both vertical equity—students with different needs receiving the same quality of education and having the same opportunities for flourishing and growth—as well as horizontal equity—students with the same needs from different regions and socio-economics backgrounds receiving the same quality of education and having the same opportunities for flourishing and growth.

Resources must be distributed so that every school district, every school, and every classroom has at its disposal the resources to ensure that every child can have their particular educational needs met. And because schools and children have different needs, equity inevitably means that resources will be directed unevenly for outcomes to be fair.
Like identified needs at the school and school district level, identified individual student needs should be the foundation for funding inclusion; without this, the risks of children falling through the cracks multiply. A new funding model should build on the current formula’s recognition that special needs students require more resources, both in terms of specialist teachers as well as additional space and supplies. To ensure that all students with special needs receive the resources they deserve, a new model should also dedicate funding to the process of identifying students. Funding for special needs must be based on actual incidence, not statistical approximations.

**TEACHER VOICES**

“My student with conduct disorder is destructive and hurts other kids the minute I don’t have him in eye shot. My gifted student gets little attention. I am told that because I only have 17 students I don’t need help… My carpet is 40 years old and looks like a health hazard but I am told that the district can’t afford the $500 dollars to replace it. I have spent about $1,500 dollars to date on resources and materials and most days I work 10 hours… Despite all of this I love my job, I love my kids and try to do my best every day to meet their diverse needs.”

“When it comes time for music class, the support workers for students with special needs do not come with them. They are assigned to other students during that time… Both me, the teacher, and the students suffer, and sometimes the safety of students is at risk because of this absence of needed supports.”

“Underfunding incentivizes schoolboards to re-allocate special needs targeted funding away from where they were intended.”

Just as class-size ratios are an important indicator of education quality and capacity, so too are ratios of specialist teachers indicators of inclusion. Mandating and properly funding such ratios in a new funding model would avoid the kinds of shortages that have occurred recently. Between 2001–02 and 2015–16, the number of full-time equivalent specialist teachers in British Columbia fell from 7,186 to 5,492, or 24%. And this decline of nearly a quarter in the number of teachers occurred even as the number of students with special needs designations that entitle supplementary funding increased by half over the same period.

A needs-based approach would also expand the number of students who qualify for additional funding. Inclusion is not complete when students with “high incidence” special needs are identified but excluded from dedicated funds. Once a need is identified, it must be met with resources.
Once again, we should be cautious of oversimplification: “There is an inevitable trade-off between, on the one hand, the complexity created by including in the formula various indicators of special education need and of differences in schools’ structural costs (i.e., costs the school cannot influence) and, on the other, the simplicity of a formula with only a few indicators” (Levacic 2008). British Columbia’s current formula has swung too far in the direction of simplicity.

**RECOMMENDATION 6:** Funding for special needs should remain anchored in identified needs and include dedicated funding for identification.

A new funding model should also build on the use of indicators of socio-economic disadvantage in the current formula. Social and economic factors are major determinants of educational success. Countering their impact requires additional and targeted resources for at-risk students. As such, indicators should be granular, wide-ranging (covering at least the same categories currently used to calculate the supplement for vulnerable students), and updated frequently enough so that funds are distributed according to an accurate, current picture of the differences between districts.

This funding model review is also an opportunity to continue the work of meaningfully implementing the education-related components of the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) as well as the Truth and Reconciliation Commission’s Calls to Action, in particular Call to Action 57: “We call upon federal, provincial, territorial, and municipal governments to provide education to public servants on the history of Aboriginal peoples, including the history and legacy of residential schools, the *United Nations Declaration on the Rights of Indigenous Peoples*, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism” (Truth and Reconciliation Commission of Canada 2015).

Teachers applaud the Ministry of Education’s ongoing efforts to ensure the infusion of Aboriginal content and perspectives throughout the K–12 curriculum and these efforts are a prime example of what it means to allocate funding based on readily identified needs. The continued work of reconciliation relies upon a collaboratively developed provincial action plan, with clear end goals, to ensure that in-service and learning resources reflective of the diversity of First Nations communities in BC are developed and readily accessible for all grade levels and all subject areas in BC schools. A new needs-based funding model would match resources to these measurable demands for materials, professional development, and hires.
As Figure 1 demonstrates, the per-FTE-student funding amount for Aboriginal learners has not only stagnated but fallen in real terms over the past seven years. It is also the lowest per-student amount among the supplements for unique student needs. This is despite there being many unmet needs in terms of Aboriginal educators, facilities, materials (including library materials), language education, and more. A new funding model should bring funding for Aboriginal education in line with needs and place greater emphasis on the difficult, necessary work of reconciliation within the public education system.

Finally, there are particular challenges faced by rural and remote schools and those districts that have a disproportionate number of them. A new funding model must ensure that there are resources for the fixed and extraordinary costs that do not simply vary with the number of students and that are required to maintain smaller schools. Moving to a model more closely based on identified needs will help meet this goal. Measures in the current formula like the climate factor should be expanded and even more closely tied to actual needs (for example, 30-year temperature averages are too long in an era of accelerating climate change).

Equity between districts is compromised not just by existing differing needs, such as the size and dispersion of schools, but also by differing capacities, primarily the capacity to raise funds locally. Currently, school districts have a range of means to raise additional funds, including tuition paid by international students. This last category of additional funds contributed an extra $242 million to school board budgets in 2016–17, with six districts accounting for over half of this additional revenue. While international students generate costs, boards have found expanding their numbers to also be a means of raising funds on net.

School districts also have various other means to raise additional revenues open to them. Across all districts, “Other Revenue” totalled over $180 million in the 2016–17 school year with a gap of over $700 per-FTE student between those best and worst able to raise additional own revenues from other sources.

**RECOMMENDATION 7:** The new funding model must take into account and equalize the unequal capacity of school districts to fundraise.

Adequacy of funding is suffused throughout every question raised by a review of the education funding model. For example, here, adequate funding will decrease incentives for school districts to raise additional funds, expending energy outside their core educational mission. In a similar vein, this review cannot be an excuse to simply redistribute funds from larger, urban districts to smaller, rural ones. All districts face varying degrees of funding crunch—each district simply has its own particular pressures,
from higher concentrations of poverty to higher concentrations of English language learners; to highly dispersed, smaller schools to maintain and staff. Any new model must be one of providing adequate funding to all districts, not merely redistribute inadequate funds between them, especially as both urban and rural districts have been forced into cutbacks.

It is also vital that any revised formula maintain a means to equalize resources between districts with different average levels of teacher experience (and therefore compensation). Districts with higher proportions of older and more experienced teachers cannot be penalized for maintaining a more experienced complement.

**RECOMMENDATION 8:** No school district loses funding as a result of the funding model review.

**Comprehensive funding**

Finally, the new provincial funding model should explicitly acknowledge the broad range of goals and needs that the education system is called upon to meet. Funding must cover the full mandate of a public education system; it must be comprehensive.

If, as has been the case, additional costs are off-loaded onto school districts with no capacity to make up the shortfalls, the inevitable cuts are ultimately felt in the classroom. A formula whose scope fulfills the entire education system mandate will avoid a destabilizing piecemeal approach. Too often rigid formula amounts, especially when left unadjusted for long periods, produce gaps in funding and ensuing cuts. In the meantime, teachers and parents increasingly pay for classroom supplies and teaching resources. Parents can also be forced to take on other costs, such as private services for children with special needs. Neither should happen under a model that guarantees comprehensive funding.

**TEACHER VOICES**

“As a new teacher setting up my first classroom I have already spent hundreds of dollars and without that spending my classroom would have been barren without the basic supplies needed to support student learning.”

“Teachers are tired and under increasing stress—there is not one big issue to point at—just the daily erosion of supplies, resources and time that are demanding more of our own time, energy and financial resources.”
When the cuts have become too painful, gaps have been plugged with arbitrary, temporary measures. When shortfalls are too big to ignore, the province is forced to create special-purpose funds to cover needs going unfilled. A glaring recent example is the Student Transportation Fund established in 2016 after years of inadequate and patchy bussing service across a number of districts. Sadly, this and other gaps are patched only when underfunding is already acutely felt.

A funding model based on identified needs and subject to regular, annual re-evaluation of formula amounts would do much to avoid these kinds of arbitrary measures that do too little, too late. A comprehensive funding model for operating funds should also be more closely aligned with capital funding. Deferred maintenance today shows up in larger capital needs tomorrow.

**RECOMMENDATION 9:** The funding model review should start from a full picture of the mandate of the public education system.

Substantial changes to existing responsibilities as well as new responsibilities must be explicitly funded as new needs, without the expectation that they will be simply absorbed out of existing allocations. The ongoing implementation of the new curriculum is instructive. Teachers need time, resources, and a wide variety of professional learning opportunities—and access to these crucial things in all 60 school districts across the province—to make a success of implementing the new curriculum. However, the amount of additional funding directed specifically for curriculum change was $1 million for targeted training in 2015 and $7 million in 2016 for teaching coding and for curriculum change. (The previous government claimed $100 million was provided over three years—but that was in release time for days that had already been paid for, given that they were regular days worked.) In contrast, when the Year 2000 program was in development from 1989 to 1992, a total of $482 million was spent on implementation—a combination of targeted funding and funding for school districts to use as they defined needs.

Student mental health is another growing area of concern and responsibility. As many as 12.6% of Canadian children and youth between the ages of four and seventeen—or nearly 84,000 in BC—are likely experiencing clinically significant mental disorders at any given time (Waddell et al 2014). Meanwhile, only one-third of BC youth with identified mental health concerns are estimated to be receiving specialized services. This is the product of systemic underfunding and service shortfalls, both in the health and education sectors, combined with ongoing cultural stigma, geographic constraints, and economic barriers.
A needs-based approach to funding is but one part of the solution but it is an important part. Teachers, counsellors, and specialist educators have been left to manage the impacts of students’ mental health concerns with inadequate information and staffing, contributing to delayed specialist/clinical intervention and referral processes. The new funding model should be flexible enough that a greater awareness to mental health is met with targeted and needs-based resources adequate to the task of tackling this issue in schools.

The Ministry of Education has a responsibility to identify system-wide and individual needs as they arise. The new funding model should have the flexibility to target funding toward ongoing, core needs as well as specific short-term needs as these arise, whether this is the implementation of a new curriculum or a change in the tax code, such as the coming co-incidence of the MSP premiums and the new Employer Health Tax for one year. The new funding model should be able to deal with new pressures to regular and recurring costs, such as hydro rates or school transportation costs. And it should be responsive to new and growing needs, such as a growing incidence of mental health issues and obligations flowing from recent changes to the BC Human Rights Code.

The public education system has a broad mandate—one that is central to building a vibrant, democratic, and equitable world for this and future generations; any new funding model must be ready to fulfill this mandate as completely as possible.

References and further reading


