

The Learning Mosaic:

A multiple perspectives review of the Alberta
Initiative for School Improvement (AISI)

Summary Report



By

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The views and recommendations expressed in this report are those of the researchers and not necessarily those of Alberta Education.

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Introduction

In October 2008, as it embarked on its ninth year of implementation, the Alberta Initiative for School Improvement (AISI) held a province-wide colloquium to take stock of the progress of AISI to date and to help set directions for the future. Involving key stakeholders, members of AISI's partnership, AISI staff from the School Improvement Branch of Alberta Education, and AISI project leaders, the colloquium established an open and transparent process of dialogue and reflection about AISI's strengths and limitations. Colloquium participants discussed small and large adjustments that may be needed in reshaping AISI's future to secure the best possible outcomes for the province's schools.

AISI invited to the colloquium several researchers who acted as critical friends for the initiative. They participated in dialogue, observed AISI presentations, interacted with stakeholders, and responded to a range of the extensive documentation on AISI and evaluations of AISI that had been produced to date. Robert Crocker, formerly of Memorial University in Newfoundland, contributed his considerable expertise in experimental and survey design as well as statistical meta-analysis of existing data sets to raise issues regarding the measurement of AISI's impact. Dennis Sumara and Brent Davis, then at the University of British Columbia, presented their field-leading work on complexity theory and its uses in education, and provided initial feedback on how AISI may or may not be operating as a complex system. Andy Hargreaves, formerly of the Ontario Institute for Studies in Education and now at Boston College, offered some initial observations on AISI's architecture as a change strategy and its similarity to and difference from other systemic change strategies. Finally, Pasi Sahlberg, incoming Director of the Centre for International Cooperation and Mobility in Finland, provided his observations from an international policy perspective.

Following the colloquium, these contributors were invited to undertake deeper research on the design, impact and future of AISI, including its sustainability. Sixteen research questions were finalized in February and March 2009 through a process of consensus by the research team and Alberta Education. Five of these were overarching questions:

1. *What is the distinctive theory-in-action (change architecture) of AISI?*
2. *What is the value of AISI? (What are the values of AISI?)*
3. *Is it possible for jurisdictions to do these projects and activities without AISI?*
4. *Would the values of AISI continue without funding?*
5. *Has AISI changed the culture of education in Alberta? If so, how has it?*

These were supplemented by eleven subsidiary questions:

1. *What have been the successes of AISI, as assessed from multiple perspectives?*
2. *What are both the obvious and the subtle impacts of AISI?*
3. *How is AISI lived and practiced by educators?*
4. *What are the change processes at play for administrators and teachers?*
5. *What have been the difficulties and challenges of AISI?*
6. *Has AISI encouraged school authorities to try new things?*
7. *Has AISI encouraged those involved to take risks and to be more innovative?*
8. *What are the opportunities to expand the measures of AISI projects from the vantage point of complexity theory?*
9. *What are the opportunities to disseminate knowledge generated by AISI by using its networks and complexity thinking? Have these opportunities been used to promote change across AISI jurisdictions?*
10. *How has AISI influenced policy developments at the school, jurisdictional, and provincial levels?*
11. *What are the implications of the research findings for AISI as a work in progress?*

Andy Hargreaves agreed to serve as overall project coordinator for three research teams to provide multiple perspectives on AISI. Pasi Sahlberg would be a critical friend who was also appointed to the project and would advise AISI on its work in light of global trends in education and especially on the needs of high-skill, high-achievement knowledge societies.

Components of the Review

The multiple perspectives review is organized in three data-based studies and two reviews that relate AISI to educational reform trends elsewhere.

1. The Quantitative Meta-analysis

The first research study, by Robert Crocker, is a meta-analysis of existing provincial data sets concerning tested achievement results, as well as survey data of satisfaction levels for parents, students and teachers, in relation to the effects of AISI. This study tries to ascertain whether there were observable changes over time and across main AISI themes

and strategies, the extent to which these changes could be attributed to AISI, and whether some AISI themes and/or strategies were more effective than others in relation to valued outcomes. In addition, this study evaluates the suitability of existing data sets and data gathering processes for determining the impact of AISI and makes suggestions for future improvement in AISI's subsequent funding cycles.

Given that AISI was designed as a school improvement strategy rather than an experimental or quasi-experimental research design, it is not possible to clearly separate AISI effects from other changes that may have occurred. However, positive change has taken place over time and across AISI projects and measures. Effects are larger for surveys than for achievement measures. This raises the possibility of a Hawthorne or halo effect in which individuals attribute value to an intervention not because of the inherent value of the treatment but rather because of the added attention being shown for their work—though this very attention and involvement is a significant contribution to teacher morale.

Traceable gains on provincial achievement tests are marginal, which could be a source of concern. On the other hand, external factors—such as rising immigration trends in Alberta, an influx of new teachers prepared in other provinces, a surge in retirement of experienced teachers, and especially the increase in the percentage of English language learners—cannot be separated from AISI outcomes in terms of the available data base and research design. Indeed, the lack of a decline in achievement scores related to AISI in this context could be regarded positively.

In general, despite the most rigorous efforts, it is exceedingly difficult to isolate the independent effects of AISI using retrospective quantitative data. This is because

- only some AISI projects are designed to have a deliberate impact on tested student achievement;
- AISI involves almost all Alberta schools and has been increasingly integrated with other initiatives and developments for a decade;
- Existing province-wide data sets are not amenable to tracing the impact of different AISI projects on particular students;
- projects are often complex and developmental so that treatments do not follow experimental design principles with consistent replication from one site to another or one year to the next; and
- the data collected by teachers within projects such as provincial achievement test scores or satisfaction surveys are sometimes not suitably aligned with the purposes of their projects.

2. *Three Contrasting Case Studies of District Implementation*

The second research study by Davis and Sumara analyzes how three school district cultures influence the development of AISI projects in their jurisdiction.

The first school district emphasizes *learning* as its central purpose and is able to use AISI funds to amplify its pre-existing mission to increase learning for all students and teachers. Most AISI resources were used to further webs of connectivity and communication among teachers. Resources are allocated to releasing teachers' time for meeting and coaching in their schools—spreading teacher leadership across the profession and enabling teacher leaders to stay close to classroom practice. The district's decentralized network structure binds it together through frequency of interaction, learning and change, across schools. There is no insistence on direct control at every point by the district administration. One result is strong personal relationships, high trust and intense professional learning across the district.

The other two districts are less successful in establishing a learning culture for students and teachers. The second district promotes *service* as the work for the district. Educators work extremely hard, they are bound by a common moral purpose, and personal sacrifice of time and energy is a pervasive virtue. However, personal relations and lines of authority operate in a largely vertical fashion and schools are not well connected to each other except through common training and implementation events. Teacher leadership largely takes teachers out of the classroom into consultant positions in the district office. This results in the district's focus being something of a mystery to many schools. This makes it difficult for the district to play an active role in producing new kinds of knowledge.

The third district employs a *managerial* framework that realizes the aspirations of the educational leaders for control of teachers and accountability for outcomes. Initiatives are aligned with a single district focus that is in turn related to a provincial "thrust." Resources are allocated to employing consultants in the district office, and hiring external out-of-province trainers to distribute training packages and run workshop events. There is little independent interaction between or learning among schools independently of these events and schools have little awareness of each other's activities. Teachers become depleted by what they experience as excessive auditing of their instruction without a parallel system of continuing support and development for their teaching.

This study indicates that external improvement initiatives such as AISI *amplify* the pre-existing mindsets of district administrators. All three district sites use AISI funds to extend their already established principles and strategies. They do not use the funds to reflect critically upon goals and interventions that are already in place. If AISI is to change existing district cultures and their impact on learning and teaching, it will be necessary to develop robust new strategies for organizational learning that transcend district boundaries. One possibility would be to fund networks of learning where educators from one district visit peers in others. Some of this interaction should be school to school, without all interactions being orchestrated by vertical district control.

Across districts there was a rather remarkable knowledge of contemporary educational research, and this phenomenon was consistently attributed to AISI. There were also pockets of remarkable innovation in the districts visited, with occasional deep commonalities in interest, expertise, and activity across jurisdictions. At the same time, there seemed to be little sustained and meaningful collaboration among jurisdictions, raising the possibility that the time may be right for a more deliberate strategy of connecting and collaborating within the initiative. AISI needs to stress the importance of creating new knowledge through school-based innovation as in the first district and not just disseminating existing knowledge through measures such as workshops and training programs as in the other two. In recognition of this need, AISI leaders have already begun catalyzing cross-district learning by requiring project applicants in Cycle 4 to learn from the work other districts have already undertaken in areas with affinities to their proposed project goals and strategies.

3. Cross-site Case Study

The third study by Shirley and McEwen is a qualitative condensed case study of 12 varied and geographically dispersed school districts supported by AISI. This study employs interviews and focus group discussions as well as analysis of school, district and project documents, to gather data about the meaning and value of AISI among educators and district personnel involved in and responsible for design, implementation, and assessment of AISI activities at the district level. This up-close view of AISI provides evidence of the perceived architecture, impact, strengths and challenges of AISI as well as the context in which AISI operates among those who are most closely engaged with it.

The research findings indicate that AISI enjoys enormous popularity among educators. They credit it with helping them to advance their skills as thinkers, researchers, and practitioners. Teachers state that they have acquired new skills as researchers and change agents who identify problems in children's learning, collaborate with colleagues to formulate potential solutions, and then acquire funding, skills and support to put their professional knowledge to work. Educators have side-stepped the kinds of short-term strategies that lead to "gaming the system" to get test scores up. Instead, they are asking more profound questions of themselves and of their colleagues. They are challenging each other to work with students to establish agreed-upon criteria for excellence in learning and they are providing children with multiple ways to acquire and demonstrate excellence. They are embedding technology into a repertoire of instructional strategies that presume intelligence and voice on the part of learners.

Alberta educators feel that their long-term vision of educational change matters and that it plays a role in shaping the future policies of their province. They are undoubtedly at the leading edge of efforts to professionalize teaching internationally, through their promotion of collegial interaction, change advocacy, professional networks, sustained inquiry and responsibility for results.

This report finds that areas in which AISI needs to push further include

- increased parent and community engagement in the focus of AISI projects and throughout the whole AISI process;
- a stronger focus and greater impact on secondary schools;
- creating an accountability system that is less cumbersome, yet that develops and deploys more robust indicators of progress that are related to the project goals that schools pursue.

Of these three areas, the research team notes that AISI has increased emphasis on parent and community engagement in Cycle 4.

4. *The Four Ways of AISI*

Andy Hargreaves draws on the three above components of the review and other previous research studies of AISI to judge how AISI compares to four ways of system-wide change that are and have been evident in international educational change strategies. He argues that *four change imperatives* now confront all educational leaders and change agents—economic reconstruction, social cohesion, ecological sustainability, and generational renewal. The challenge for policy makers, he says, is to respond to these four imperatives in order to generate the changes that are appropriate for the 21st century.

Hargreaves argues that AISI has gone well beyond a 1970s *First Way* of change that emphasized innovation and generous state funding but failed to develop parallel systems of professional responsibility, accountability, and also consistency. AISI also has surpassed *Second Way* mindsets of the 1980s, in which educators in other jurisdictions were subjected to increasingly political control, public skepticism and market competition. By promoting high levels of public confidence in educators and by emphasizing creativity, complexity, innovation, and teamwork, AISI would appear to have institutionalized *Third Way* principles of the 1990s that used networks and data to drive reform through recalcitrant systems and educators.

For many contemporary school reformers, the development of such “data-driven decision making” among educators represents the culmination of decades of efforts to improve and secure teaching as a profession. Yet increasing international evidence indicates that such a framing of contemporary education injects a managerial tenor and competitive framing into schools that in many ways undermines their moral and collegial fabric. For this reason, Hargreaves indicates that policy makers in Alberta would be well advised to consider the role that AISI might play in promoting a *Fourth Way* of change that values data along with teachers’ professional judgment and balances targeted interventions in children’s areas of academic weaknesses along with more mindful approaches to teaching and learning that nourish creativity, innovation, and the “soft skills” of teamwork and compromise.

5. *Global Policy Perspectives*

Hargreaves' challenge to policy makers to fortify and extend AISI's already significant contribution to Albertan education is next complemented by Pasi Sahlberg, who considers AISI from the vantage point of his scholarship on knowledge societies and especially high-achieving Finland. Sahlberg notes that AISI's change architecture promotes systems-level change and not just a loose accumulation of localized initiatives. He praises the generous and continual allocation of substantial resources to AISI and their encumbered nature, which prevents them from being bled off into staff replacements or other expenditures that are especially salient in a time of economic contraction.

Enjoying high-level provincial leadership, inviting grass-roots initiatives, and encouraging mid-level school district coordination and learning, AISI is viewed by Sahlberg as "a shining star in the sky of global large-scale school improvement." Sahlberg credits AISI leaders and Alberta Education with the development of a carefully conceived and highly responsive change network that is perhaps unique in its support for the technical core of teaching and learning that occurs between teachers and students. Sahlberg concludes that "It is difficult to find anywhere a comparable change effort that would be of the scale, size and overall magnitude as AISI."

Sahlberg, like Hargreaves, encourages AISI to consider two further developments for its medium and long-range planning. First, he suggests that the central management of AISI expand the definition of public engagement in AISI Education Partners to include individuals from youth, sports, or business sectors. Second, he finds that although there is evidence of some lateral networking among AISI projects and districts, this dimension of the work—the "communicative connectivity" in the language of Davis and Sumara—could be strengthened and would benefit AISI in the future.

Overall Findings

This section summarizes the findings of the review. It is organized by the overarching questions.

AISI constitutes a world-class and world-leading example of a system-wide educational strategy. This strategy, designed by Alberta Education and its partners, inspires teachers and administrators. It enhances their professional growth and enthusiasm. AISI seeds new, research-informed practices within local communities then spreads them across districts and schools; and it diffuses existing knowledge as well as creating new knowledge.

AISI embodies a change process that addresses the complexity and adaptability necessary in a fast-moving, knowledge-driven world. It avoids the excesses of unregulated chaos and permissiveness of uncoordinated innovation on the one hand, and of hierarchical and inflexibly linear systems of top-down or layered implementation on the other. It achieves

all this new and ground-breaking work with no discernible negative impact on the exemplary record of student performance as measured by provincial achievement tests for which Alberta has become world-renowned.

AISI has unfolded in a continuous culture of inquiry, openness, reflection and adaptation that is rare among government-sponsored innovations. The School Improvement Branch of Alberta Education does not merely endure critical feedback but actively solicits and then rapidly responds to it. All projects have onerous accountability requirements and have been subject to rigorous evaluation, leading to clear consequences of adaptation, change, and shifts of focus or direction. In the past decade, AISI has transformed and continues to transform

1. *from a project-driven and initiative-driven approach to a more embedded and continuous change process and strategy;*
2. *from a predictable, time-bound planning process of uniform funding cycles, to a more flexible process of planning and development;*
3. *from a collection of disconnected or loosely connected projects to a province-wide network of improvement and innovation;*
4. *from a change process that has swung between bottom-up and top-down orientations in the first two cycles, to a change process that balances and integrates these dynamics and also adds a strong, lateral peer-driven change dynamic in the third and fourth cycles;*
5. *from a strategy to spread and embed existing knowledge in order to enhance improvement and implementation, to a strategy that also creates new knowledge in support of increased innovation.*

There are also some limitations of AISI so far. For example, elementary schools have embraced AISI more deeply than high schools, where teachers' understandings of their roles as experts in the area of academic content knowledge have made it difficult for them to focus on the province's learners and their current and future needs. AISI also needs to work more deliberately on leadership development, and especially on modifying the roles of principals and other staff to support the development of teachers. AISI projects can also benefit from more robust knowledge dissemination and exchange across district lines. Finally, there is scope for more explicit attention to the development of stronger relationships with parents and other community members. These and other findings are organized in relationship to the five overarching questions that guided this study and are elaborated in a following section on recommendations.

1. *What is the distinctive theory-in-action (change architecture) of AISI?*

AISI promotes and funds locally-developed, district-led innovations and improvements. It networks educators and parent and community members together through schools, conferences, and a web-based AISI Clearinghouse. To do so, AISI has a four-dimensional architecture:

1. *vertical* – top-down and bottom-up;
2. *lateral* – project-to-project, school-to-school;
3. *radial* – outside-in and inside-out research expertise and practitioner inquiry;
4. *temporal* – connecting medium-term and longer-term perspectives.

AISI is a complex mixture of top-down, bottom-up and laterally-driven change. It is guided by the AISI Education Partners Steering Committee and managed (but not micromanaged) by the School Improvement Branch (SIB) of Alberta Education. SIB works collaboratively with the AISI partners to set priorities and strategic directions for each cycle. SIB manages three-year project cycles; it further manages the application and approval process, coordinates conferences and updates a website Clearinghouse to create connectivity across projects. SIB operates in a consistently transparent, inclusive and responsive way, with a quiet passion for locally-grounded and professionally driven change that serves the public good of all students. It sees its role as facilitating, steering and gently but firmly monitoring and revising this process over time.

From the bottom-up, AISI's theory-in-action empowers educators to develop professional and intellectual projects based on their own locally-created needs assessments and subsequent initiatives for self-initiated change. Many of these projects come from the individual passions or recent professional development experiences of teachers and administrators who connect their initiatives to the priorities in the current AISI Cycle. Others – up to 40% per cycle – are selected by districts in relation to province-wide themes such as differentiated instruction, professional learning communities (PLCs) or assessment for learning that are AISI priorities and also related to a more general policy thrust in Alberta Education. Although all projects feel local in location, many are nonetheless provincially central in origin. Irrespective of the source, what matters in any project is the degree of ownership teachers and school administrators feel towards it.

AISI is not only bottom-up, top-down and lateral in nature; it also is radial, combining inside-out and outside-in change processes that penetrate into its core and back out again. Several districts have collaborated with university faculty at various points in their project cycles and received assistance in designing surveys, studying student achievement data, and modifying assessment practices. Annual AISI conferences also connect participating schools to outside expertise and feedback. AISI has made explicit the connection between academic research and professional practice. External stimulation and assistance are balanced and integrated with internal study and reflection.

Like all change strategies, AISI also has a fourth dimension: time. AISI's three-year cycles establish longer timelines for change, action and results than is common in most other system-wide reform efforts. In less stable political environments, these are usually driven by the demand for measurable short-term achievement results. In these other cases, this culture of short-term planning and thinking can deplete energy and distract attention from securing the longer-term transformations in teaching and learning that are more appropriate for competitive knowledge economies. AISI largely avoids these distractions through an approach that is iterative, transparent, and participatory. Project participants consistently praised AISI staff for their accessibility and respect for the on-the-ground realities of teachers and school staff.

Some respondents advised greater fluidity in terms of entry to and completion of AISI projects. They also suggested it would be prudent to reduce the accountability demands on projects, which were described as onerous. Last, the case studies and school district reviews indicated that while interconnection (or connectivity) across schools within districts is strong, it is underdeveloped across districts. Districts also vary in how they articulate school interconnections. On the whole, though, the current change architecture of AISI enables its project leaders, in collaboration with district personnel, to develop an approach to student learning and staff development that is more inquiry-oriented, reflective, and sustainable than most strategies.

2. What is the value of AISI? (What are the values of AISI?)

Positive changes over time were found for all measures in all three AISI cycles. AISI's impact on provincial achievement tests (PATs) was small but larger for local achievement measures and survey measures. Discernible effect sizes on PATs are rather modest, and many seem attributable to being statistical artifacts of, for example, regression towards the mean or outlier effects.

PAT results can be interpreted in a number of ways. One potential explanation is methodological. PAT data are not easily connected to traces of particular students who have experienced specific AISI initiatives. Another possible explanation is systemic. AISI has become increasingly integrated into the educational system and improvement processes of the province as a whole. It is a complex reform, not a simple treatment or intervention, and part of its success is its increasing influence on the educational culture in general. Highlighting its independent impact is far from easy. One promising step forward might be to design some AISI projects as experimentally controlled interventions.

The strongest AISI impacts were on measures of teacher growth. It is possible that these represent a halo or Hawthorne effect although that in itself is an indicator of teachers' appreciation of the trust, resources and recognition that are accorded to them in the AISI architecture. Our review's qualitative findings suggest something deeper is also at work in terms of AISI's impact on teachers' sense of professionalism and on the development of teacher leadership opportunities and experiences. These factors represent AISI's values as much as its actual value.

Informants all agreed that AISI is catalyzing authentic and deep conversations about teaching and learning that are contributing to a richer repertoire of instructional practices and improved student learning in Alberta. They credited AISI with giving them new ways to observe student learning, identify obstacles to achievement, and revise instruction so that their students learn at high levels. By exposing educators to alternative sets of practices, by embedding ongoing support into schools through AISI-funded lead teachers and consultants, by connecting teachers and projects to each other in relationships of mutual learning and support, AISI has helped to re-ignite teachers' curiosity about new and better ways of teaching their students.

3. Is it possible for jurisdictions to do these projects and activities without AISI?

Educators tended to view AISI not so much as the point of departure for new values, but rather as an opportunity and funding source to realize values they already cherished but found difficult to fulfill. Districts needed funding to support AISI consultants, to provide teachers with release time to learn from their colleagues, to purchase resources, and to send teachers to professional development activities such as the annual conferences of the Alberta Assessment Consortium. Especially in remote rural districts, the opportunity to leave small towns to access new ideas and research findings at provincial or regional conferences and establish lateral learning networks with educators in implementing them was priceless. Districts would almost certainly not have embarked upon many innovations and activities without AISI.

AISI has also helped combat conservatism in the culture of teaching and administration by promoting a culture of risk-taking. In his remarks at the AISI Conference in February 2009, Alberta's Minister of Education, Dave Hancock, communicated that mistakes were to be expected and welcome along the way to meaningful school change. Such encouragement was very much appreciated by educators who were eager to pilot new initiatives and to take greater risks to reach disengaged students.

Teachers stated that AISI projects offered just the right amount of risk and reward for those who loved teaching yet also wanted to explore other dimensions of the educational profession. AISI enables teachers to develop new skills in the areas of experiential education, technology development, and local history that may not be directly linked to gains on provincial achievement tests but nonetheless have great educational value. This approach is integral to the deployment of 21st century professional skills in a rapidly changing, culturally diverse and knowledge-driven society. It is essential to a learning mindset.

4. Would the values of AISI continue without funding?

Many participants from elementary schools said the cultures of their schools had changed and the practices that came about due to AISI were now embedded in their schools. In secondary schools, AISI values were embedded in some departments but others conserved a transmission model of education that did not promote student engagement.

Gains are being made at the high school level, but AISI project leaders indicated that improvements require more careful modeling and support for faculty over time of the kind that appears to be the case in elementary schools.

The districts and cultures most likely to sustain AISI values in the absence of continuing funding are those that already operate as complex and effective learning communities. These districts have established the organizational cultures that support teachers' continued introspection, collaborative inquiry, and adjustment of instructional practices. Such districts organize their leaders and not just their teachers into PLCs to study data and research and to inquire into and improve instructional supports.

The Davis and Sumara study of contrasting district implementation indicates that some districts organize their cultures more around foci such as service and management that tend to concentrate leadership centrally and administer projects vertically rather than around learning, where both leadership and innovation are distributed more laterally and bound together by frequent, complex interaction. The former types of districts may find it difficult to accomplish the learning goals they have established for themselves because they conflict with pre-established institutional cultures that make learning subsidiary to service or management. AISI values can be piloted in such organizational cultures, but they cannot become embedded, and they are unlikely to be sustained without funding and also a development of networking structures within AISI that may stimulate productive disturbance of these existing district cultures.

Some educators expressed anxiety that AISI funding might be folded into base budgeting, let alone discontinued entirely, especially in a time of economic contraction. They worried that without clearly marked funding, the sorts of innovative, grass-roots projects associated with AISI will fade away. They feared that without continued support for AISI as an autonomous agency, their schools would not prosper from the opportunity to mature into the more complex learning systems and sources of innovation that Alberta will need for its students to thrive in the future.

5. Has AISI changed the culture of education in Alberta? If so, how has it?

AISI's change architecture has led to clear shifts in the culture of teaching and improvement in Alberta. We found many instances of AISI influencing school and district policies in ways that represented a marked shift in understandings about teaching and learning at the school and classroom level. This was evidenced in the creation of common report cards, the alignment of curricular content with local assessments, and the development of principals as instructional leaders of learning, for example.

Instead of seeing assessments as unwanted external impositions of provincial achievement tests, the emphasis on assessment for learning has helped teachers grasp the value of diagnostic and formative assessments that can support their classroom practice. There is room for further growth in terms of teachers and schools developing and deploying more of their own designed or chosen quantitative instruments and indicators

so they can monitor impact of and progress in their self-designed initiatives; but the emphasis on assessment for learning in AISI's third cycle has undoubtedly started to lay a foundation of a learning-driven culture of greater assessment literacy.

One clear and demonstrable impact of AISI on the wider educational culture of Alberta is in terms of consolidating and extending a strong and enthusiastic culture of professionalism and professional collaboration among schools and their teachers. Without exception, all of the educators and parents we interviewed were enthusiastic about AISI, and the way that it energized the profession. Schools have changed as a result of AISI's work to provide more time and support for professional development, and to increase dedication to collaborative decision-making involving a wider range of participants. If there is any single area in which AISI is most advancing policy changes at the provincial level and throughout the wider culture of education, it is in this crucial domain of collective learning, connectivity among schools, and overall enhancement of capacity.

Along with changes in teaching have come shifts in how leadership is developed in schools. Leadership is no longer confined to the principal's or superintendent's office but is increasingly being spread throughout the professional community, where it retains a close connection to classroom learning. This is a significant, inspiring and world-leading aspect of the changing culture of education in Alberta, at time when teacher leadership is little more than a cliché in most other jurisdictions.

There remain three ways in which AISI does not yet seem to have influenced the wider culture of education and educational change in Alberta. The first concerns the existence of prior and parallel cultures of hierarchical leadership and administration in a number of districts. The second is related to the central administration of Alberta Education and its impact on school and district cultures. The final limitation relates to the need for extension of networking activities across districts to promote optimal learning among educators.

AISI initiatives and the ways in which they are developed are often absorbed into the existing cultures of administration within school districts, which they, in turn, seem to amplify. Districts organized on hierarchical lines with a narrative of management tend to decide on and impose a focus, invest in external packages and trainers, use resources to put coordinators into the district office thereby swelling the ranks of administration, and create little independent connectivity among schools. Lines of control are top-down, implementing administratively selected initiatives and making it difficult for schools to learn from each other. Districts with an ethic or narrative of service provide more trust, invest more heavily in relationships, and secure commitment to common goals, but patterns of implementation are still paternalistic, and staff overload is heavy. This restricts the opportunities for organizational learning.

Some of the educators interviewed in the 15 districts studied in the two qualitative components of the multiple perspectives review communicated that Alberta Education is not perceived as being part of a wider learning community. So far, AISI's flexible,

adaptable, participatory and networked approach with its broad conception of learning has interrupted this perception, but more as a refreshing alternative to larger transactional approaches that leave educators wary of other government initiatives.

The transactional model of Alberta Education is not unusual and seems to operate like most other education ministries. It is perceived by AISI participants as a system of central policy development that is then implemented through the hierarchical authority of individual superintendents and line-managed by principals below them. This system is often well organized to implement common programs and strategies. It is less suited to innovation and to developing practices that require local discretion. On the ground, AISI is in tension with the existing policy culture. But as AISI progresses further and policy goals also begin to incorporate more innovative elements suited to knowledge economy goals, this tension could become a creative and energizing one of productive disturbance. Within schools, AISI appears to be eradicating the longstanding presence of privacy in the culture of teaching. PLCs among teachers and administrators have been established to study the real and most daunting problems as well as the most inspiring and innovative challenges facing schools and then to develop new strategies for responding to them. These are not just individual teacher opportunities but collective professional responsibilities. This is an enormous achievement that has eluded educational reformers in many other jurisdictions around the world.

The greater challenge of privacy and isolation that classroom teachers have experienced in the past is now a different one. It is the privacy and isolation that insulates and separates school districts. This inhibits the potential for learning across schools and projects independently of detailed district control. While some districts have been able to surmount these problems, systemic decisions now have to be made on behalf of teachers and learners in the others:

Is AISI essentially going to an outlier to or even a safety valve for a relatively traditional provincial system of education?

Or, in a context of the province's reinvention as a competitive and innovative knowledge economy within an increasingly diverse community, can AISI now be the catalyst for a more participatory and decentralized process of policy development?

In other words, can AISI create a renewed and reinvented relationship between the central ministry and its districts as well as among the districts themselves?

By challenging districts to innovate, demanding accountability, and infusing a level of uncertainty around the maintenance of funding, AISI already provides a source of productive disruption of business-as-usual in districts. It capitalizes on local ingenuity and inventiveness and empowers educators to explore new strategies for engaging reluctant learners. It is unlikely that this innovation and creativity would occur without AISI. Increased support for school networking across districts will spread and accelerate these processes.

Recommendations

AISI's change architecture, theory of action, and sensitivity to issues impacting Alberta's diverse schools are unusually sophisticated and responsive. Yet even the best change initiatives can be strengthened. This brings us to our recommendations:

1. *develop* improved ways of collecting and compiling provincial achievement data that will make it possible to trace the impact of complex but distinct initiatives like AISI;
2. *create* leadership and support systems for teachers and administrators involved in AISI projects to access existing data bases, request and receive data analysis services, and design their own instruments and indicators of accountability that are appropriate to their project goals;
3. *extend* AISI project content and processes towards greater involvement of parents, community members, businesses, universities and other partners;
4. *increase* AISI's attention to and impact regarding innovation and improvement in high schools, with particular reference to increasing Alberta's relatively low rates of high school completion;
5. *invest* in province-wide networks that cut across districts, that reach beyond annual conferences and that incorporate proven design principles of effective network architectures that have clear, positive impacts on system-wide outcomes for students;
6. *develop* leadership skill and capacity among *all* principals and district-level leaders so that the effectiveness of AISI projects does not suffer when existing leadership capacity in particular schools and districts is not strong;
7. *embed* AISI into Alberta Education as an integrated policy strategy. Do this without diminishing the attention, resources, advocacy and professional development regarding the distinctive approaches to professionally driven, locally adaptable and laterally networked processes of improvement and innovation that AISI has championed.

These seven recommendations are clustered into six broad and interconnected thematic areas that warrant attention for the further success of AISI in coming years:

1. *Preservation*
2. *Purpose and focus*
3. *Impact*

4. *Culture*
5. *Structure and funding*
6. *Leadership*

1. *Preservation.* The research team finds much that is of value in AISI. Educators consistently state that AISI is making tremendous contributions to the advancement of the teaching profession by giving educators new sets of skills for understanding student learning and assessment practices. Within districts, educators appreciate the opportunity to learn from their colleagues in other schools, and venues such as annual AISI conferences enable educators to meet and exchange their learning with others from throughout the province. This culture of inquiry and exchange then emboldens educators to explore new ideas that they can adapt to local circumstances to better serve their students and their communities. Whatever changes might be made to AISI in the future, these should ensure the *preservation* of these praiseworthy principles and their accompanying strategies.

2. *Purpose and focus.* AISI's positive benefits are significant. They can be used to contribute to the honing of AISI's *purpose and focus*. At the start of its second decade, AISI acknowledges that it no longer is an initiative but a strategy that has proven its value and become an anchor of the province's school improvement efforts. A more systemic focus on areas that proved difficult for AISI in its first ten years—such as high school improvement or increased parent and community engagement in schools—is now warranted. More explicit emphasis on innovation and sustainability, with particular reference to 21st century learning, may also be of value. These latter themes are already present in AISI Cycle 4's recommendations, They merit even greater emphasis in the second decade and overall future of AISI.

3. *Impact.* AISI is a school improvement strategy, not an experimental or quasi-experimental research design. Nonetheless, accountability and improvement arguments make it prudent to develop systemic support that could enable in-school inquiry and systemic evaluation to make more efficient and effective use of data to better measure AISI's *impact*. The research team therefore recommends that AISI establish an AISI Institute of Data (AID) to collect, compile, and compute data related to individual students, schools, and districts for use by policy makers and AISI projects alike. The team also recommends that AID also provides customized support for schools and projects to select and align impact data in relation to project goals.

4. *Culture.* AISI's *culture* is dynamic, intellectually rigorous and sustainable Educators were consistently appreciative of a policy of innovation that genuinely enhanced teaching and learning in a manner that respected their insights and promoted their continual professional growth. At the same time, AISI's culture could be enriched further if AISI is even more proactive about building lateral learning networks across as well as within districts. AISI educators have established a positive culture of sharing practices and celebrating successes but they might also benefit from a more challenging culture of frank acknowledgment of stalled innovations, flat achievement results or differences

among schools in making progress. One of the challenges for AISI is not only to amplify district cultures but also to challenge and change them where appropriate.

5. *Structure and funding.* AISI can be enhanced by rethinking its *structure and funding strategy*. A number of schools and districts would welcome a more flexible funding and proposal cycle, with the possibility of proposals that extend beyond the usual three-year limit. This could enable districts to go deeper into especially challenging areas without the uncertainty and need for premature closure that is sometimes built into three-year ceilings on grant-funded projects. Districts and projects can be supported through targeted funding to network with one another in more sustained ways. If funded, the AISI Institute for Data (AID) could help to gauge the benefits of longer and more flexible projects versus those that are more limited in scope and duration.

6. *Leadership.* Like many change strategies, AISI generally has assigned leadership a secondary status in its theory of action. AISI tends to amplify existing leadership cultures without an explicit acknowledgment that they may be more or less capable of supporting AISI activities. For instance, teacher leadership in AISI has been encouraged as a fundamental principle and favored strategy but without concomitant attention to its implications for leadership by principals, superintendents, and other district staff. Yet the research literature indicates that for teacher leadership to be developed in a long-term, sustainable way, ongoing technical support is crucial for principals, superintendents, and district-level staff.

Several school districts have used AISI funds to develop PLCs not only for teachers but also for administrators. These are helping administrators to identify areas in which they can help teachers to grow professionally and especially as instructional leaders. This work appears to be especially valuable in improving the quality of instruction at the high school level. Enriching such administrative PLCs by extending them in networks across district lines and enabling them to benefit from the challenges as well as support of colleagues in other districts is a natural extension of the advantages of networks for teachers' ongoing professional development. Effective networking does not come naturally though, and developing skills of network leadership should be a priority in the future.

Conclusion

AISI is an impressive change strategy that is perhaps without parallel in the world today. It contributes to teacher development and educational change in a manner that is stable, steady, and credible among the educators it most seeks to impact. AISI leadership is transparent, responsive, and trustworthy.

AISI has built a solid foundation to further evolve and address some of the most tenacious problems in educational change today. In the years ahead, AISI leaders should build upon their many accomplishments and expand the most important themes and strategies of AISI into new arenas. AISI should further promote learning across district

lines and should increase parents and community engagement in schools. More concerted efforts and sustained support need to be provided to high schools to engage students and to transform learning. In general, more flexible and also more targeted approaches to funding and funding cycles may help achieve these goals.

AISI is already promoting some of these changes in its new cycle of projects. It is imperative that AISI act decisively and boldly in leading the changes. AISI has a unique change architecture. It treats the learning of students, teachers and organizations not as a line, or even a circle, but as a complex, interlocking mosaic. AISI is a complex model of improvement and innovation and also a transparent and participatory one. This is why it enjoys increasing visibility not only in Alberta or Canada but also among policy makers in other nations. AISI's continued progress within one of the world's very highest performing systems will be keenly observed by scholars of educational change and policy makers focused on improving student learning from around the globe.