AISI – Seven Years of Enthusiasm:

Improving Learning and Schools –

Innovation, Renewal, Sustainability

Nelly McEwen, PhD
Alberta Education
Nelly.McEwen@gov.ab.ca

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AISI – Seven Years of Enthusiasm: Improving Learning and Schools – Innovation, Renewal, Sustainability

This paper discusses how to introduce innovation into school improvement efforts and ways to renew and sustain innovation over the long term. The province-wide Alberta Initiative for School Improvement (AISI), currently in its third cycle of implementation, illustrates how a large-scale improvement initiative embraces innovation, renewal, and sustainability in a culture of inquiry, collaboration, and continuous improvement. AISI provides funding for every school authority in the province to establish its own projects to improve student learning and performance. The paper provides provincial results over two cycles (2000 to 2006) and discusses how AISI encourages ongoing innovation, promotes continuous renewal of the initiative and its participants, and works toward sustaining effective practices across districts and schools.

Introduction

How does one introduce innovation into school improvement efforts, then renew and sustain it over the long term? The Alberta Initiative for School Improvement (AISI), currently in its third cycle of implementation (2006 to 2009), illustrates how a large-scale improvement initiative can continue to improve, how it is renewing itself, and how innovation is impacting teaching and student learning. The goal of AISI is to improve student learning and performance by fostering initiatives that address local needs and circumstances. This province-wide initiative gives school districts choice and flexibility in ways to improve student learning. The paper presents results from the first two cycles of implementation (2000 to 2006) and discusses innovation, renewal, and sustainability.

School improvement focuses on improving both the quality and equity of student learning by fostering enhanced strategies at the school, district, and provincial/state levels. Areas essential to promote school improvement include leadership, instructional practice, school climate, assessment and accountability, building capacity through professional development, student and parent engagement, and sustainability.

Large-scale improvement initiatives have become more prevalent as states and provinces, school districts, and schools work toward improving student learning. Initiatives vary in scope, goals, structure, and funding. Recent reviews of such programs include the American Institutes for Research (1999), Northwest Regional Laboratory (2002), and Borman, Hewes, Overman, and Brown (2002).

How do large-scale improvement initiatives renew themselves so that their intended purposes are met, yet accommodate changing circumstances? Accelerating changes in all areas of life – demographic, social, economic, and technological – have an important effect on education. Incorporating new knowledge and emerging technologies into the effective and efficient operation of schools is imperative. Schools play several roles including development of learning, socialization, and community centres for agencies working together. Schools must also embrace ways to facilitate student learning "outside the school" through technology and partnerships.

Related Literature

Literature related to this paper includes school improvement, preferred futures, change and reform, and integration and sustainability.

Just as there is a large body of evidence on ways to improve schools (e.g., Wang, Haertel, & Walberg, 1993; Marzano, 2000; Scheerens, 2000; Teddlie, & Reynolds, 2000; Hopkins, 2001; Marzano, Pickering, & Pollock, 2001; Molnar, 2002), so too is the literature on change and reform growing (e.g., Fullan, 1999; 2005; Fullan, Hill, & Crevola, 2006; the Organization for Economic Cooperation and Development (OECD)[1]; Alberta's Commission on Learning, 2003; Oblinger & Oblinger, 2005; the Partnership for 21st Century Skills (2004); The New Media Consortium (2005); and the Canadian Education Statistics Council (2007).

"Change in education is easy to propose, hard to implement, and extraordinarily difficult to sustain" (Hargreaves & Fink, 2006, p. 1). This quotation summarizes the difficulty in bringing about large-scale reform. Change is dynamic and complex. Change is hard work and takes time. According to Fullan, who has written extensively about change:

> It takes less skill to resist than to learn. Resistance comes naturally; learning complicated things in a group setting does not. It is easy for people to avoid or fail to persist in the deep, cognitive, emotional, and political learning cycles that will be needed to sustain the group's focus on complex new challenges. Fullan (2005, p. 101)

To develop competence in an area of inquiry, students must have a deep foundation of factual knowledge, understand facts and ideas in the context of a conceptual framework, and organize knowledge in ways that facilitate retrieval and application (Bransford, Brown, & Cocking, 2000). Consolidation of knowledge helps to link research and practice: 1) elaborating messages at a level of detail that makes them usable to educators and policy makers, 2) communicating messages in a manner that is most effective for each of the audiences that influences educational practice, and 3) using principles as a lens through which to evaluate existing educational practices and policies. Strengthening the link between research and practice involves conducting research that combines the expertise of researchers and the wisdom of practitioners, and extend the frontier of learning research by expanding the study of classroom practice ((Bransford *et al*., 2000, pp. 251-252).

In the United Kingdom, the Teaching and Learning Research Programme (TLRP) is carried out through sequential project phases supplemented by successive thematic initiatives. The main purposes of thematic activities are to synthesize research from across and beyond the TLRP and to progressively deepen understanding of key issues. The coordinated program attempts to maximize the contribution of each research project to the whole TLRP effort. James and Pollard (2006) articulated ten evidence-informed principles of effective teaching and learning[2] to guide policy and practice.

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[1] [1] Future-oriented OECD education reports include *The Creative Society of the 21st Century* (2000), *Knowledge Management for the Learning Society* (2000), *Governance in the 21st Century* (2001), *What Schools for the Future?* (2001), *Networks of Innovation: Towards New Models for Managing Schools and Systems* (2003), and *Think Scenarios, Rethink Education* (2006). See the reports on the OECD website: http://www.oecd.org.

[2] Effective teaching and learning: 1) equips learners for life in its broadest sense, 2) engages with valued forms of knowledge, 3) recognizes the importance of prior experience and learning , 4) requires the teacher to scaffold learning, 5) needs assessment to be congruent with learning , 6) promotes the active engagement of the learner, 7)

While a preferred future – one that focuses on innovation and the wisdom of practitioners, researchers, and policy makers – is the aim, threats to change include inertia, resistance, constraints, and standardization. Inertia influences adoption of a reform or innovation based on how it relates to people's skills and knowledge, interests and motives, commitment, comprehension, perceived risk, and compatibility (Thomas, 2002). Embedded systemic resistance to change and uncertainties relating to changes in the outer environment and the impacts those may have on the future of schooling mean that policy making for the future of schooling cannot be treated as a straightforward linear process (Shapiro, 2006). In the drive to personalization, Hopkins (2006) identifies the promise of addressing longstanding constraints on reform and innovation including socioeconomic variables, physical space, teachers responsible for whole groups at any one time, unsophisticated use of technology, uniform pace of learning, and the conservative nature of school organization. Institutional constraints include institutional structure, funding, regulations, measurement, entitlement, and political choice (Leadbeater, 2006). Finally, the antithesis of innovation is standardization whose effects include a graduation crisis for some students, narrowed curriculum, widening learning gap, undermining teacher confidence and competence, eroding professional community, and resistance to change (Hargreaves & Fink, 2006).

Kanter's turnaround solution (2004) is framed around three connected cornerstones of accountability, collaboration, and initiative. People want to share information and take responsibility (accountability), they want to work together (collaboration), and they feel that what they do matters (initiative). People take initiative, which results in improvements and innovations. These kinds of behaviors are central to confidence; they feed motivation and morale, and create a culture that makes it easier to solve problems (pp. 46-47).

A culture of collaboration invites participation and develops ownership and commitment. All who have an interest should be involved. AISI exemplifies this spirit of collaboration through its partnership with teachers, administrators, parents, trustees, academics, and government. Kanter identifies collaboration as one of three central behaviors for confidence.

> People want to work together. Mutual attraction is high, interpersonal bonds are strong, and relationships are multifaceted because people take the time to know one another in a variety of settings. People are willing to help others and give them a chance to excel. They feel a sense of belonging that makes them more amenable to taking direction from others (Kanter, 2004, p. 47).

Any large initiative hopes to sustain what was learned: its culture, practices, and successes. Hargreaves and Fink (2006) drew on the corporate and environmental literatures of sustainability and sustainable development as well as their own research to identify seven principles[3] of sustainability: depth, length, breadth, justice, diversity, resourcefulness, and conservation.

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fosters both individual and social processes and outcomes, 8) recognizes the significance of informal learning, 9) depends on teacher learning, and 10) demands consistent policy frameworks with support for teaching and learning as their primary focus (James and Pollard, 2006, pp. 6-7).

[3] Depth – preserve, protect, and promote the fundamental moral purpose of deep and broad learning; Length – preserve and advance the most valuable aspects of life over time; Breadth – sustainable leadership is distributed leadership; Justice – does no harm to and actively improves the surrounding environment; Diversity – promote cohesive diversity by creating cohesion and networking; Resourcefulness – develop and do not deplete material and human resources; Conservation – honor and learn from the best of the past to create an even better future Hargreaves and Fink (2006, pp. 18-20).

The United States Partnership for Education for Sustainable Development[4] developed national sustainability education standards – that students acquire and apply knowledge of 1) intergenerational responsibility and interconnectness, 2) environmental, economic, and social systems, and 3) personal and collective action. These standards could apply to adults as well.

Sustainability requires action – actually doing something. Knowledge is powerful, but it must be mobilized for it to have a positive impact. According to Goldsmith (2008) the challenge of life is doing; we understand but find it hard to do. For example, we understand diets but find it difficult to lose weight. He recommends peer coaching as a way to develop knowledge because it is transferable. Coaching activities are positive, simple, focused, and fast. He recommends spending time with people who want to change. Successful people believe they *have* succeeded, they *choose* to succeed, they *can* succeed, and they *will* succeed. Team building involves assessing 'where we are' versus 'where we need to be', selecting both team-wide and individual behavior for change, practicing feed*forward* and follow-up, and measuring positive change.

Any large-scale initiative requires evidence to establish whether or not it has had a positive impact. Evidence-based policy and practice require data from a number of sources and methods to inspire confidence in results that are corroborated. Multiplicity is a hallmark of evidence. Multiple perspectives (e.g., students, parents, teachers, public), multiple methods and multiple data sources (e.g., assessments, surveys, observations, administrative data) and multiple levels (e.g., elementary, secondary) assist in triangulation. Longitudinal study and the use of effect sizes help to judge the value of an intervention. Yet many large-scale initiatives do not systematically collect and analyze data. Expert opinion and judgments based on up-to-date scientific research constitute high quality valid and reliable evidence; unsubstantiated, subjective and opinionated viewpoints do not constitute such evidence[5].

The Evaluation Gap Working Group (2006) investigated why rigorous impact evaluations of social programs are relatively rare. The group lamented the fact that few programs benefit from studies that determine whether or not they actually make a difference. This absence of evidence is an urgent problem. Among the Working Group's findings: impact evaluations avoid costly mistakes, prevent doing harm, can distinguish real successes from apparent successes, current methods can answer questions that are important to social policy decisions, and ignorance is more expensive than impact evaluations. Impact evaluations can provide timely information and complement other studies. The group asks "if we do not start now, when will we ever learn?"

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[4] See http://www.uspartnership.org/ The website has a number of useful sustainability resources for K-12 education.

[5] See a discussion on how research and evaluation evidence contributes to policy making at http://www.policyhub.gov.uk/evaluating_policy/how_res_eval_evid.asp#systematic.

Alberta Initiative for School Improvement

The Alberta Initiative for School Improvement (AISI) is a province-wide school improvement program in which individual school authorities decide:

1. which areas of student learning and performance need attention,
2. how to go about improving these areas (new teaching strategies, student support, etc.), and
3. how to provide evidence that improvement has taken place (measuring student performance).

AISI was developed through a collaborative partnership[6] in 1999 and first implemented in all Alberta school authorities in the 2000/2001 school year. The goal of this program is to improve student learning and performance by fostering initiatives that reflect the unique needs and circumstances of each school authority. AISI provides funding for every school authority in the province to establish its own improvement projects to address local student needs and circumstances. Initially allocated for three years from 2000 to 2003, funding was extended for a second three-year cycle from 2003 to 2006. Currently in its eighth year of implementation, more than $500 million have been invested in this initiative.

The AISI approach to improving student learning is through partnerships and collaboration in a culture of inquiry, collaboration, and continuous improvement. AISI encourages creativity and innovation in enhancing strategies to improve student learning based upon local needs. All school authorities participate in AISI. The provincial government funds all projects that meet criteria[7], provides a number of supports to project teams, approves annual project reports, and analyzes and reports overall provincial results.

AISI may be seen as a large group of action research projects on school improvement. The initiative can be thought of as a set of quasi-experimental projects focused on improving learning. Each project must identify target outcomes and find ways to measure these outcomes. The essential approach to evaluation is to examine change over time on measures of student achievement, satisfaction or other valued outcomes. In research design terminology, each project is conducted as a one-group pretest-posttest design or time-series design.

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[6] Alberta Education, Alberta Home and School Councils' Association (AHSCA), Alberta School Boards Association (ASBA), Alberta Teachers' Association (ATA), Association of School Business Officials of Alberta (ASBOA), and College of Alberta School Superintendents (CASS). University Faculties of Education (Alberta, Calgary, Lethbridge) were invited to join the partnership in spring 2000.

[7] AISI criteria for project approval include a project description, school community involvement, support of implementers, literature and research, improvement goal(s) aligned with strategies and measures, outcome measures, baseline(s) and improvement targets, key strategies and processes, evaluation process, integration and sustainability, knowledge dissemination and sharing, ongoing administrative support, staffing requirement, budget projections, project expense percentages, certification by project coordinator, and certification by superintendent. All requirements for project planning and annual reporting are found in the *AISI Handbook for Cycle 3 (2006-2009)* (AISI Education Partners Working Group, 2006).

Provincial reports combine projects to give a provincial picture. Combining results across projects is a way of introducing both "replication" and "differentiation" into the design. That is, like projects can be clustered to determine if they give consistent results and unlike projects can be differentiated to determine if some kinds of initiatives work better than others.

Improving Student Learning: Provincial Report for Cycle 1 (Alberta Learning AISI, 2004) documents the processes and outcomes of the AISI program from its inception in 1999 through its first cycle of implementation from 2000 to 2003. The results indicate that AISI had a profound impact on the culture of schools in Alberta. Among the impacts were improved student learning, development of a culture of continuous improvement, a renewed focus on teaching and learning, better decision making based on evidence, job-embedded professional development, and shared and distributed leadership.

Improving Student Learning: Provincial Report for Cycle 2 (Alberta Education AISI, 2008) documents the processes and outcomes of the AISI program during its second cycle. It draws on a wide range of data from 2003 to 2006 to present findings related to implementation support and outcomes. The report compares results from Cycle 1 and Cycle 2 and presents an agenda for action based on the findings, and draws conclusions and implications. Cycle 2 continued to demonstrate a positive impact on student learning and teacher, student, and parent satisfaction. Elaboration is presented in the results section (page 7).

Multiple sources of evidence indicate that Cycles 1 and 2 of AISI have had a profound impact on education in Alberta (Alberta Learning AISI, 2004; Parsons, McRae, & Taylor, 2006; McEwen, 2007; Alberta Education AISI, 2008).

Methods and Data Sources

In order to demonstrate the effectiveness of AISI, one can ask the following questions. Has there been an effect and in what direction is the effect? Has the effect been "caused" by the intervention of interest? The use of effect sizes represents a sophisticated approach to examining average effects. Effect size essentially measures whether or not an effect is clinically important rather than whether it is statistically significant. Indeed, the concept of effect size is gradually replacing that of statistical significance as a way of looking at research findings and especially as a way of synthesizing results. In AISI, effect sizes are computed as improvements over baselines.

In the AISI program, school authorities are responsible for collecting quantitative and qualitative data, and analyzing and reporting results for each project. Reporting requirements include descriptive results on prior performance (baseline), annual targets, and annual results. School authorities are advised to use multiple methods and data sources to provide evidence of the success of their projects. School authorities must interpret annual results and propose improvement strategies for subsequent years.

AISI projects are expected to have an appropriate balance of quantitative and qualitative measures. Most project teams that chose quantitative measures used provincial achievement tests and diploma examinations as indicators of success. These tests have the advantages of long-term use

by teachers and extant analyses and reporting, which means school staffs do not need to expend resources in test development, analysis, and reporting. However, these tests and exams cover only four grades (3, 6, 9 and 12), so projects that include students in other grades need to find other measures. In addition to the provincial tests and exams, school authorities used more than 40 different commercially available standardized assessment instruments (e.g., Canadian Tests of Basic Skills, Gates-MacGinitie Reading Tests, Schonell Tests, and Brigance Tests) to measure student learning. For projects that included affective and behavioral goals, project teams had to develop or adapt local measures that required analysis and interpretation in order to report results.

For the provincial report, measures were grouped into four categories:

- Provincial Tests – provincial achievement tests (grades 3, 6, and 9) and diploma exams (grade 12)
- Local Assessments – standardized tests and locally determined student achievement measures
- Student and Parent Surveys – Parent satisfaction and student satisfaction, behavior, and attitudes
- Teacher Surveys – Teacher growth (knowledge, skills, and attitudes) and satisfaction results

Combined effect sizes for the various project categories were calculated using a program for research synthesis (Borenstein & Rothstein, 1999). AISI Project Annual Reports also require project teams to interpret findings in four major areas: student outcomes, effective practices, integration and sustainability, and a summary. During Cycle 2 qualitative data were analyzed to summarize types of information provided using QDA Miner (Péladeau, 2004).

Results

Results are based on the AISI Project Final Reports for Cycle 2. The provincial report (Alberta Education AISI, 2008) is on the website at http://education.alberta.ca/aisi.

Effect size represents an approach to examining average effects; the approach essentially measures whether or not an effect is important. To determine the extent to which AISI projects improved over the baseline, all data (baseline and results) were converted to a common scale (standard score) that permits comparison of improvement regardless of the type of measure (test, survey, etc.) that school authorities used. An effect size expresses the increase or decrease in standard deviation units.

For each measure, the baseline and annual result were converted to standardized (z) scores with a mean of zero and a standard deviation of one. The effect size for each measure was determined by the difference between the z scores for the baseline and the actual result averaged over the measures for each project and weighted by the number of students involved in each measure. These average effect sizes were grouped into four categories: no effect[8] (less than 0 or not significant), minimal (.01 to less than 0.2), small (0.2 to 0.3), medium (0.4 to 0.7), and large (0.8 or higher).

[8] *No effect* includes all negative effect sizes and all positive effect sizes that are not statistically significant.

Project Effects

Project effects are based on 241 public authority school projects. These projects typically involved multiple schools and grade levels, and large numbers of students. Effects were determined on four categories of measures: provincial tests, local assessments, student and parent surveys, and teacher surveys.

Three-Year Average Effects were positive on all categories of measures. Three-year average effects were highest for locally determined student achievement (0.33) and teacher growth/satisfaction measures (0.34). Project effects on student and parent satisfaction were small (0.20) and on student on achievement measured by provincial tests was minimal (0.07).

Average Annual Effects for each category of results, calculated over all projects having such measures, indicate that results consistently increased from the first to the third year for local tests, student and parent satisfaction, and teacher growth and satisfaction. Teacher surveys and local assessments demonstrated the greatest increase over time. Annual effects on provincial tests were minimal to small. Project teams commented on students' improvement on achievement as well as student confidence, behavior, attitudes, and engagement.

Effects by Project Classification – Effects were calculated for the five major types of public projects: professional development, literacy, mathematics, technology, and school climate. Table 1 presents the three-year average effects for these types of projects. Of the 20 effect sizes, five were moderate, eight were small, and seven were minimal. Generally the most positive impacts were on teacher growth and satisfaction, student achievement measured locally, and student and parent satisfaction. Small effects were found for achievement measured by local tests and moderate effects for teacher growth and satisfaction in professional development projects; these projects had minimal impact on provincial achievement or student and parent satisfaction. Literacy projects had a positive impact on achievement measured locally and student and parent satisfaction, but minimal impact on provincial achievement or teacher growth and satisfaction. Mathematics projects had moderate effects on teacher growth and satisfaction; they also impacted locally determined student achievement and student and parent satisfaction. Technology projects demonstrated the strongest evidence of success: moderate effects were found for achievement on local tests, teacher growth and satisfaction, and student and parent satisfaction. The five technology projects that used provincial tests also had a positive effect (0.31). School climate projects demonstrated small positive effects on locally determined achievement, teacher growth and satisfaction, and student and parent satisfaction.

Table 1: Three-Year Average Effects for Major Types of Projects

Type of Project	Student Achievement		Satisfaction	
	Provincial Tests	Locals Assessments	Students & Parents	Teachers
Professional Development	0.04	0.20	0.06	0.42
Literacy	0.02	0.24	0.24	0.03
Mathematics	0.03	0.13	0.16	0.47
Technology	0.31	0.59	0.47	0.60
School Climate	0.10	0.26	0.19	0.29

Change Over Time

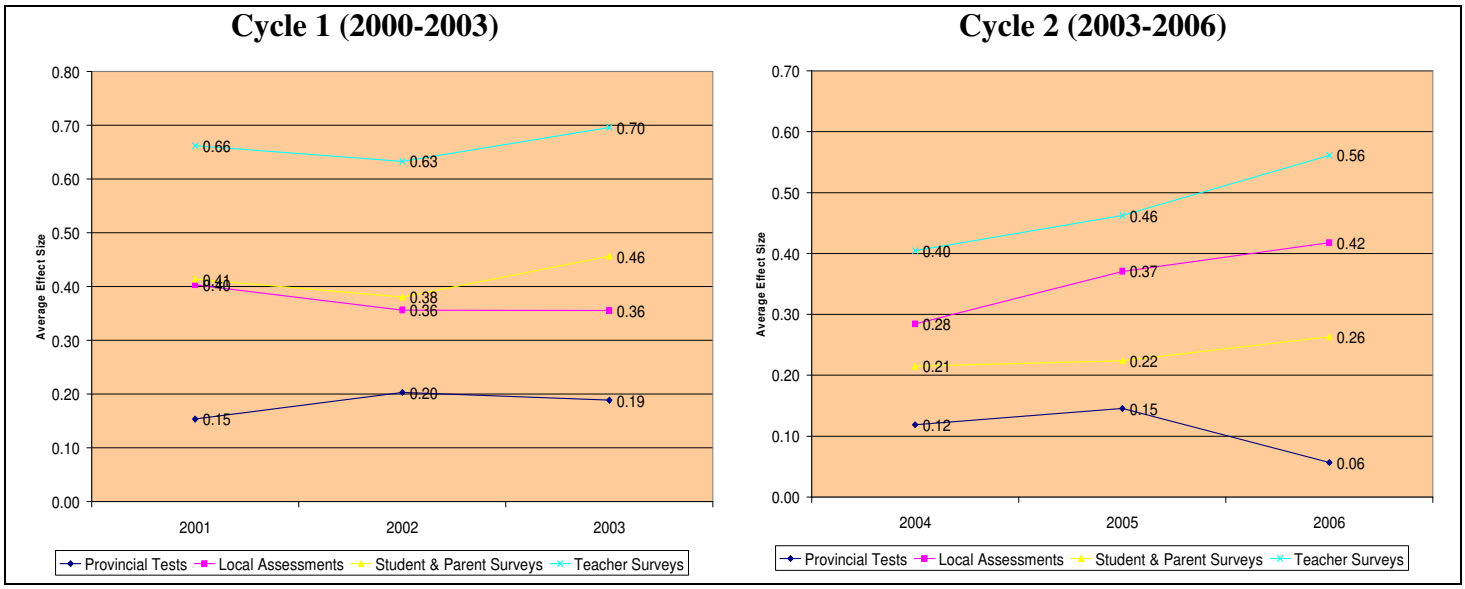
What overall effect did the second cycle of AISI have on student learning (measured by provincial tests and local assessments), its intended beneficiaries (students and parents) and its participants (teachers)? Average annual effects are based on improvement over a three-year average baseline, that is, Cycle 1 results are based on improvement over the average of 1998 to 2000 and Cycle 2 on a baseline of the average of 2001 to 2003, the first three years of AISI implementation. Thus the results represent continuous improvement over two cycles or six years of AISI implementation.

In both cycles, student achievement and satisfaction increased over time. Average annual effects for student achievement measured by provincial tests increased from 0.15 to 0.19 in Cycle 1. In Cycle 2 improvement increased from 0.12 to 0.15 in the second year; improvement was lower (0.06) in the third year. Average annual effects on student achievement measured locally ranged from 0.40 to 0.36 in Cycle 1 and then from 0.28 to 0.42 in Cycle 2. Student and parent satisfaction increased from 0.41 to 0.46 in Cycle 1 and 0.21 to 0.26 in Cycle 2. Teacher growth and satisfaction increased from 0.66 to 0.70 in Cycle 1 and 0.40 to 0.56 in Cycle 2.

There was a slight implementation dip during the second year of Cycle 1 on local achievement and participant satisfaction (students, parents, and teachers). This dip recovered during the final year for participant satisfaction, but not local achievement which remained flat as did achievement on provincial tests. Achievement measured locally rose consistently from the first through the third year of AISI Cycle 2. Achievement results during the second and third years demonstrated a medium impact. Participant satisfaction also increased consistently over the cycle.

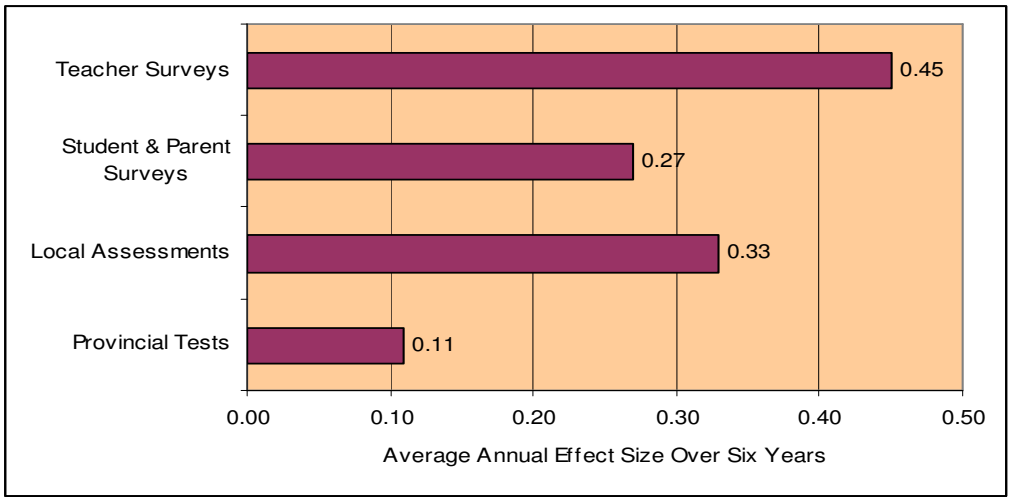
Although projects in Cycle 1 and 2 were different, AISI is a six-year, province-wide improvement initiative whose goal, principles, criteria, and procedures have remained constant. Furthermore, the school districts are the same and almost all schools in the province participated in AISI. Since Cycle 2 projects tended to be larger in scope involving more teachers and students, it was harder to demonstrate an impact. The larger the number of students, the more difficult it is to demonstrate

Figure 1: Average Annual Effects of AISI Cycle 1 and Cycle 2



an effect. Taking the average of the effects over the two cycles, it is possible to estimate average annual benefits over six years. This procedure results in effect sizes of 0.45 for teacher growth and satisfaction, 0.27 for student and parent satisfaction, 0.33 for locally determined student achievement, and 0.11 for student achievement measured by provincial tests. These average annual effects can be thought of as the return on investment of AISI in improving education in the province for the benefit of its students and teachers. Figure 2 presents the results.

Figure 2: Average Annual Effects of AISI Cycles 1 and 2



Participants' Perceptions

The AISI Project Final Report (APFR) required project teams to provide information in four major areas: student outcomes, effective practices, integration and sustainability, and a summary. Factors that contributed to project success included time and resources, professional development, teacher collaboration and sharing, regular assessment, and leadership/staff development. Ongoing challenges included gathering and using data (including finding appropriate measures of student performance), professional development, time away from the classroom, finding and using substitute teachers, and administrator support. Unanticipated results included enthusiasm, support, interest, time, assessment, and leadership. Project teams celebrated success through recognition and awards, conference presentations, media coverage, and presentations.

Challenges

Review of the AISI Project Final Reports identified a number of ongoing challenges for project teams. These challenges were evident in Cycle 1 and have persisted. They appear to be issues related to large-scale improvement initiatives. Time remains a continuing issue not only for schools and teachers, but also parents and students. There is seemingly never enough of this resource to accomplish all that is intended. Another challenge is staff continuity. Changes in school and/or district leadership created problems in some instances. For example, lack of adequate project coordination and/or principal support was an issue. Changes in other school

staff negatively affected some projects. Engagement also remains a challenge. The majority of teachers and administrators were engaged in and committed to continuous improvement. However some teachers and administrators were not as engaged. Another persistent challenge is measuring outcomes, especially student outcomes. Finding appropriate measures, collecting and analyzing data, and interpreting and reporting results continue as major challenges for project teams. Measurement issues were exacerbated in projects that addressed affective and behavioral dimensions of learning or those that sought to implement innovative approaches to learning. And finally, parental involvement continues to be a concern. Efforts to provide opportunities for parents to learn about new approaches and involve them in the school's AISI projects remain a challenge.

Innovation, Renewal, Sustainability

How do large-scale improvement initiatives encourage innovation? How do they renew and sustain innovation over the long term? This section discusses these areas based on AISI. Illustrative quotations from the AISI Project Final Reports bring project teams' views to life.

Innovation

Change usually requires a catalyst. In Alberta, AISI was the catalyst for introducing innovation into education. The initiative introduced a number of innovations as well as making innovation a project requirement. Discussion also includes types of innovative strategies project teams identified as well as mobilizing knowledge.

The Initiative – AISI systematically introduced innovation into education in Alberta. The partnership among education stakeholders was new. Prior to AISI, government did not work hand-in-hand with its stakeholders to develop a province-wide initiative. The benefits of this partnership approach include:

- a diversity of perspectives in the development of the principles and procedures,
- ownership of and ongoing commitment of key advocates to the initiative, and
- partner support in mobilizing their constituents – teachers, trustees, administrators, parents – to take advantage of the AISI program.

Another innovation was the online database system. A program of the scope and magnitude of AISI would not be possible without an online system to support implementation, monitoring, and accountability. The AISI Online Database System is a customized database for school authority and School Improvement Branch[9] (SIB) use. This secure online system is a single-interface, seamless service consisting of two secure components: the *extranet* for school authorities to create and submit their project plans and reports to SIB, and the *intranet* component for SIB staff to receive, review, extract, and approve project plans and reports. This flexible system allows SIB staff and AISI coordinators to work together to update projects online. Its tracking function allows SIB managers to review all changes over time.

[9] The School Improvement Branch of Alberta Education is responsible for the Alberta Initiative for School Improvement.

The online system aggregates data from AISI project reports to generate provincial statistics. It supports searching on various parameters to produce a variety of analytic reports, the major one being the provincial report. Its benefits include 24/7 accessibility, synchronicity allowing multiple users, instantaneous updating, archiving, and flexibility in generating a variety of financial and administrative reports.

In order to maximize AISI's benefits, a new research agenda proposes a strategic direction that is focused on innovation, greater attention to rigor, a wider variety of research approaches, greater in-depth analyses of results, and more extensive knowledge dissemination. Sponsors must regularly review their initiatives to decide what stands the test of time and what benefits from new directions. Evidence of what works helps to identify promising approaches and informs decisions about potential changes.

Project Innovation – One of the criteria for project approval is innovation. The initiative provides targeted funds to try new things. School authorities are encouraged to try new approaches to address local student needs. Innovation is defined broadly to include research-based strategies that have not been used before in the school authority or its schools. Flexibility, risk taking, and thinking "outside the box" are encouraged (AISI Partners Education Working Group, 2006).

The project approach is an effective vehicle for promoting innovation. Each project has a specific focus on student learning, whether literacy, numeracy, technology, or some other area of endeavor. The focus enables teachers and administrators to concentrate their energies on ways to improve in a specific area. Instructional strategies and professional learning opportunities are geared to the chosen project theme. Projects are time certain (most are for three years); they are managed through the planning and reporting requirements, and outcomes are measured annually.

School authorities had to indicate how their Cycle 2 AISI projects differed from Cycle 1. In most cases, this was interpreted to address a different level of instruction (i.e., grades 1 to 6, carried over to grades 7 to 9) or a change in subject area. Innovation defined more creatively was modest. However, if a school or district introduces a variety of strategies to improve reading, for example, this can and should be considered innovative. Two quotations[10] illustrate ways project teams described innovation in their projects.

> Support for pedagogic innovation and engaging learning: adequate resources, conceptual clarity, research-based, active continuous involvement of school administration, a critical mass of teachers participating in innovation and systematic consideration of impact on student learning. Project 10426

> During this mathematics project, the Division experienced an increase in the number of innovative mathematics initiatives which captivated the interest of students and involved parents. Activities such as Math Olympics, math trivia house league contests, Thursday Thinkers, and Problem Solving Corner excited students. Project 10322

The DVD *Improving Student Learning* (Alberta Education, 2006) was produced to raise awareness and promote understanding of the initiative. The DVD showcases students and the range of innovative projects AISI encourages. One project involved getting a whole community

[10] AISI Project Annual Reports require project teams to provide information in four major areas: student outcomes, effective practices, integration and sustainability, and a summary. All approved project reports are on the AISI website.

involved in promoting literacy. Another was a partnership between the school district and the University of Alberta and Capital Health in increasing student health and fitness. In a third project, an elementary school produced a film that was screened at the 2005 New York International Independent Film and Video Festival.

Strategies – What types of strategies did project teams use during Cycle 2? Section G of the AISI Project Final Report required teams to identify strategies that impacted student learning in five categories: instructional strategies, student assessment, project management, professional development, and parental involvement and communication. This open-ended narrative discussion was intended to explain why results occurred.

Teams identified a number of effective practices in each category. The major types of strategies are identified in Table 2. Results are reported in descending order of frequency. When most projects report using a number of strategies, it is difficult to attribute the impact of any single strategy on student achievement and performance.

Table 2: Major Types of Strategies Identified by Project Participants

Instructional Strategies	Student Assessment	Project Management/ Coordination	Professional Development	Parental Involvement & Communication
Small groups/ 1-1	Rubrics	Principal/administrator	Workshops/ conferences	Newsletters
Differentiation	Assessment for learning	AISI coordinator	Collaboration	School council
MI*/brain research	Diagnostics	Lead teachers	PLCs**	Surveys
Inquiry based learning	Anecdotal assessment	School teams	Mentoring/ coaching	Parent/teacher/student conferences
Problem solving	Observation	Consultants	Lead teacher	Volunteering
Guided reading	Self-assessment	Steering committee	Modeling	Websites
Manipulatives	Common tests	School-based coordination	Regular PD days	Personal contact
Graphic organizers	Portfolios	Central office staff		Workshops
	Standardized tests	Superintendent		Committees
	Ongoing assessment			
	Pre- & post-tests			
	Peer evaluation			

*MI means multiple intelligences
**PLCs are professional learning communities

Knowledge Mobilization – AISI is generating a great deal of new knowledge. Indeed any large-scale initiative in which teachers try new approaches to improve teaching and learning will result in information that is meaningful to many different audiences: students, teachers, administrators, parents, and the community. It is imperative that what is learned be integrated into policies, programs, and practices and that knowledge be shared as widely as possible.

AISI partners went about sharing in a variety of ways. Alberta school authorities are learning a lot about how to improve education and it is important that they share this knowledge, both within the district and its schools, as well as with others. The major vehicles for sharing are through their annual reports (which are mandatory) and by posting promising practices, products, and tools on the AISI Clearinghouse (which is optional). All approved material is posted to the AISI website. School authorities also placed AISI on the agendas of trustee and staff meetings; in some cases, districts align everything they do with AISI (Harvey, 2007). They also incorporated AISI work into district and school professional development days.

Each Alberta University Faculty of Education continued to receive AISI funds to assist school authorities in planning their projects and to develop a series of literature synopses and research reviews. They also produced newsletters and websites. The University of Alberta team wrote a book, *Celebrating School Improvement* (Parsons *et al.,* 2006), to celebrate the implementation of six years of AISI and identify lessons from the projects. While the university coordinators worked with project teams and participated in AISI workshops and conferences, there is a need to extend knowledge about AISI further into university faculty. Knowledge of AISI should be incorporated more widely into post-secondary education courses and programs. The universities are assigning student teachers to AISI project teachers for their practicum and encouraging education students to participate in AISI conferences.

At the provincial level, the two major ways to share knowledge about AISI are digitally (through the website and clearinghouse) and personally (through workshops and annual conferences). The School Improvement Branch uses feedback from website users and AISI coordinators to make the website more user friendly and accessible. The Clearinghouse contains all AISI materials including project reports, documents, publications, and workshop and conference materials. The annual AISI conference provides a face-to-face opportunity for sharing information about AISI. It attracts teachers, parents, school and central office administrators, superintendents, trustees, university personnel, and government staff. Over the three years of Cycle 2, project teams presented 164 showcase sessions, 62 poster sessions, and eight student presentations all featuring the work of AISI projects. The three annual conferences attracted 2,000 delegates. The energy and enthusiasm demonstrated at AISI conferences is contagious.

The School Improvement Scoop was introduced in January 2005 to provide AISI coordinators, Alberta superintendents, education partners, and others interested in the initiative with current and relevant information to help them improve teaching and learning. It features upcoming AISI events, summarizes workshops and conferences, and keeps readers informed of developments. It also encourages AISI coordinators to share interesting information with their colleagues. The newsletter is translated into French, as are other seminal AISI publications, and posted on the website.

Another resource to assist school authorities is *Improving Schools – Investing in Our Future* (McEwen, 2006), which summarizes and synthesizes the research literature to provide a foundation for improving student learning and performance, along with aspects of schooling. It contains chapters on education in Alberta, student learning, change, models of school effectiveness and improvement, and strategies (leadership, instructional practices, school climate, data-driven decisions, building capacity, engagement, and sustainability). This report was recently identified as the single most frequently accessed resource on the AISI website.

Education partners (teachers, administrators, trustees, government, parents) are expected to share effective practices with their constituents. Each association's annual conferences, workshops, newsletters, and teachers' conventions, meetings, and other activities are ways to share information and engage their constituents in improving learning. Partners have been active in spreading the word about AISI. For example, SIB managers have presented papers at annual conferences of the Canadian Society for the Study of Education, the American Educational Research Association, the Association for Supervision and Curriculum Development, and the National Staff Development Council. As well, delegations from foreign countries have visited Alberta to learn more about the initiative; countries include the United Kingdom, Australia, Chile, China, Germany, Japan, Russia, and Scotland.

Renewal

Renewal involves organizations, groups, and individuals adapting to changes in the environment. It involves a commitment to lifelong learning through ongoing capacity building. Activities that foster renewal usually require funding. Typically improvement or reform initiatives are set for three years. This time frame permits the development and/or adoption of new strategies aligned with measurement tools; a full cycle of implementation with opportunity for refinement in the final year; and collecting evidence of success and analyzing, interpreting, and reporting of impact and proposed changes for integrating and sustaining what was learned. Generally people are willing to commit for this period of time. After three years, staff turnover, changing circumstances, and new interests come to the fore.

Funding – It is a credit to the Government of Alberta that it renewed AISI not just once, but twice, so that funding is guaranteed until 2009. Feedback from partners and school authorities has been uniformly positive, contributing to government's decision to continue funding the program. Furthermore, Alberta's Commission on Learning (2003) praised AISI and recommended that major investments should continue to be made in educational research particularly active, classroom-based research through the initiative (p. 37). The Commission's research program highlighted the need for ongoing, long-term research on a variety of issues and stated that research should be used to guide future policy decisions (p. 98).

Engagement – Who should participate in a change initiative? Staff who have an interest in, are committed to, and have the necessary expertise should be invited to take part in an improvement project. Voluntary participation promotes success. Motivation becomes essential as tasks become more challenging. Change is hard work that requires dedication, commitment, and perseverance. Willing participants become champions and models for those who are initially reticent to become involved. Appropriate professional development, targeted specifically at areas that need to be learned, helps teachers learn new skills that they can then incorporate into their instructional repertoires.

Just as teachers and administrators need to be engaged, so too do students, who are becoming increasingly diverse. Students are active participants in the learning community. They differ from earlier generations in that they have grown up with technology and are very comfortable with it. Their aptitudes, attitudes, expectations, and learning styles reflect the environment in which they were raised. This can create an intergenerational gap that teachers and administrators must address in providing learning opportunities that engage these diverse and technologically literate students. See for example, Alberta's Commission on Learning (2003) and Oblinger and Oblinger (2005). AISI's focus on student learning and performance by addressing local needs and circumstances attests to the preeminence of engaging students in their own learning.

People learn by doing. This is true of students, teachers, or parents. Project teams observed the following about engagement.

Students	This AISI project has provided us with research opportunities and knowledge of teaching strategies that will lead to higher student engagement and greater potential to serve the needs of our students (e.g., Differentiated Instruction, Developmental Assets, Brain-Based Learning, Multi-Age, Project-Based Instruction, Assessment for Learning and Alternative Programs). Project 10503

Teachers	We are much less isolated in our work and less defensive. We engage in professional dialogue more often. Professional development is intentional and focused so that new learning actually occurs for the staff. Teachers benefit from learning about their teaching and the effect it has on students. We are much more collaborative as we learn and research together. We know that continued learning is essential. We are continually making changes and adjustments as we learn more. Our mission, vision, goals, commitments and school-wide agreements continue to define who we are in significant ways. We have a strong story to tell. Project 10443
Learning Communities	Professional learning communities are now a true part of teachers' professional practice. Teachers were given the opportunity to engage in communities where they could participate in common dialog and share similar values, norms and orientations toward teaching. Teachers began utilizing inquiry, research and reflection to seek and share learning. Also, the learning communities helped alleviate the sense of teacher isolation, especially in the small school setting. Networking between and among small schools became very successful. Videoconferencing is an area where all interviewed found the experience very beneficial to establishing online communities. Project 10021

In describing AISI, Hargreaves and Fink (2006) commented:

> AISI slows down entropy by injecting additional resources into a system in a way that creates energy exchange and renewal, engaging the hearts, minds, and wills of all teachers in raising standards through *shared targets* that address authentic improvement in learning and not merely superficial gains in test scores. (Hargreaves & Fink, 2006, p. 222)

Continuity –Annual staff turnover during the first two cycles ranged from 10% to 15%, which meant there was considerable stability in project leadership. Indeed many of the original coordinators served through Cycle 2, while others moved into school and district leadership positions. Approximately a third of AISI coordinators are new for Cycle 3, which has implications for building the required set of AISI skills: working with staff to identify, select and/or adapt research-based intervention strategies and assessment tools, keeping staff committed and on track, collecting and analyzing data from multiple sources, and interpreting and reporting findings and implications.

There has also been staff turnover in partner representatives and the School Improvement Branch. Change provides both an opportunity and a challenge: an opportunity to inject fresh ideas and approaches; a challenge to integrate newcomers, who bring new perspectives but do not have the history of developing the initiative.

Just as staff needs renewal, so too does an initiative. Remaining true to an initiative's goal and principles, yet letting it evolve in desired ways requires ingenuity. Emerging knowledge and technologies have much to contribute. For example, the internet has virtually changed the way people identify contacts and resources. More and more material is being posted on the web for ready public access. And the increasing sophistication of communications technology is making it easier to overcome barriers of time and space to work with others regardless of where they are.

According to Collins (2005), greatness is not a function of circumstance, but largely a matter of conscious choice, and discipline (p. 31). Sponsors must regularly review their initiatives to decide what stands the test of time and what benefits from new directions. Evidence of what works helps to identify promising approaches and informs decisions about potential changes.

Capacity Building – An important aspect of renewal is ongoing commitment and support for professional development. In today's knowledge economy, there is a need for people to continue learning throughout their lives. All teachers and administrators – whether novice or veteran – need to continue learning throughout their careers. Professional development (PD) is a process that is intentional, ongoing and systemic, and requires that continuous inquiry be embedded in the daily life of the school. Effective PD is sustained, job-embedded, and focused on specific topics that have high potential to increase student learning. PD should be directed toward improving student learning and evaluated to determine whether it has resulted in increased learning and achievement for students.

Capacity building that engages the entire teaching staff of a school is more effective than professional development for just a few teachers. If improving student learning is viewed as a school priority, it is more likely to take place. State, district, and school policy can help. In Alberta provincial policy requires Individual Professional Growth Plans for teachers, and Annual Education Plans and Annual Education Results Reports for both school jurisdictions and schools.

In addition to inservices, workshops, and conferences, AISI project teams were involved in many different types of professional development including teacher collaboration, team teaching, coaching, mentoring, peer support, inter-school visitations, and networking. During Cycle 1, 17 % of AISI expenditures were on PD activities; during Cycle 2 PD expenditures increased to about 43% of AISI funding. As more projects were district-wide, they involved more schools, teachers, and students. PD costs can include release time for teachers, travel and accommodation, fees, and costs for presenters, facilitators, and speakers.

> Professional development took place in a number of creative and traditional ways (workshops, school visitations, mentorship sessions, use of email contact lists, web page and bulletin board postings, video conferencing, lead-teacher/subject specialists support, teacher collaboration and sharing, upgrading summer course, twelve-week leadership series and numerous job embedded strategies). Project 10503

> Workshops and conferences allowed team members to broaden knowledge and awareness of different teaching practices, theories, and strategies relevant to the diverse AISI student population. Project 10222

Sustainability

Integration refers to educators incorporating new practices, strategies, learnings, and key findings into their instructional repertoires. Ideally there will be transferability of educational practice and student learning to other classrooms/situations and school staff beyond project participants. Sustainability refers to institutionalization over the long term. Planning and reporting, changing culture, and collaborative action are ways to promote sustainability.

Planning & Reporting – AISI projects are designed to have lasting impact on educational practices in schools. A plan outlining how to continue to benefit students and influence effective teacher practices in future years (beyond the AISI project) is part of the project design. What is learned through research and project implementation should be systematically incorporated into schools and system-wide practices. Sustainability involves transference and institutionalization of practices as part of the culture of a school and/or jurisdiction. (AISI Partners Education Working Group, 2006).

AISI project teams identified several ways to integrate and sustain what is being learned. Strategies included using purchased resources, collaborating/sharing, time for ongoing professional development, changing the culture, and developing leadership capacity. These strategies are illustrated in their own words.

Resources	Because schools are now better equipped with manipulative resources and teachers have received demonstration lessons using them, the resources will continue to be a tool to support mathematical understanding. Project 10065
Collaboration/ Sharing	Collaboration time will continue to be scheduled into the timetable as teachers feel it is the most effective way to initiate and sustain positive change within the school. Project 10362
Time for PD	Integration of time, scheduling of release time, and aligned PD has resulted in structural sustainability at the school and district levels. Project 10527
Cultural Change	We have met all of the goals of the AISI Cycle II project including fostering a culture of mathematics. Those practices that are held near and dear to our hearts and souls make up our culture and we do not easily discard them for the flavor of the month. Project 10119
Leadership Capacity	All participants were asked to assume a leadership role within their own schools by sharing their understandings and changing practices. Project 10317

Changing Culture – The culture of education in Alberta is changing. AISI has provided the means, the impetus, and opportunities for educators to become partners in their work. Funding provides the resources to make change possible. Annual workshops and conferences create opportunities for cross-district collaboration among coordinators, lead teachers, administrators, and others involved in changing education to improve teaching and learning. AISI reports document the knowledge gained through trying new approaches to teaching and learning, measuring the intended outcomes, reflecting on affective and behavioral dimensions of change, and adopting what works.

Before AISI, educators interacted largely among themselves (that is, teachers among teachers, administrators among themselves, and so forth). They now talk to one another and actively work toward finding solutions to common problems. Teachers are working with other teachers, not only in their own schools, but also across schools in the district, and sometimes across districts.

According to a seasoned AISI coordinator, AISI has had a deep and lasting impact on teaching. Change is gradual so we often think it is not occurring. In reflecting on the effect of AISI on teachers, students, schools, and learning, one needs to think back to life before AISI.

> The best teachers are those who are supported as learners themselves. The encouragement and affirmation of *teachers as learners of best practices* that has been a key part of AISI is creating an environment where teachers can thrive. Our students deserve the best teachers and AISI is helping them get what they deserve. (Gertz, 2007, p. 3)

An enduring legacy of AISI is the development of improved relationships: among the education partners, among staff in schools, and between educators and academics, teachers and students, and teachers and parents. AISI projects reduce the isolation many teachers feel in their classrooms. By working together, teachers develop a renewed sense of professionalism and pride in their enhanced instructional repertoires. (Alberta Learning AISI, 2004, p. 50).

An external perception of AISI is provided by Hargreaves and Fink (2006) who wrote:

> The firm focus on student learning – the first principle of sustainability – is undoubtedly an asset to the initiative. … But it is the spirit of belief in, trust of, and support for schools and teachers to improve themselves that infuses human as well as financial energy and resources into the system. … It takes a long-term, trusting view of improvement by valuing proximal as well as final measures that indicate progress toward greater student achievement. (Hargreaves & Fink, 2006, pp. 221-222)

Resistance – Most teachers and principals are engaged in their AISI projects. However, as in all walks of life, there are those who resist, either actively or passively, in trying new things. Resistance came from students, parents, teachers, and principals.

Students and Parents	In some instances students were resistant to inquiry and frequently claimed to prefer lectures, notes and tests. Well-designed inquiry work demands more of students in terms of intellectual investment than many have previously experienced. In some instances parents were resistant to learning approaches that they themselves had not experienced. It is recommended that teachers make assessment criteria as transparent as possible to both students and parents and enlist the support of parents as collaborators who are invited to participate in the inquiry work of their children. Communicating this to parents and students helps to educate everyone about the expectations associated with high quality inquiry work. Project 10443
Teachers	As in any initiative, resisters always challenge, but one of the lessons we learned was to embrace and learn from conflict. While all coordinators worked with at least one resister, none of us ever gave up. We worked to develop positive relationships with them, pushed forward, and learned that for every step back there were often two steps forward. Progress happened, but perhaps not as quickly as we would have liked. We also learned that if you can turn a resister around they [sic] often become your strongest supporter and ally and we did turn around a few. With slow, deliberate and purposeful interaction we have seen growth in all teachers. Project 10328
Principals	There was a general lack of involvement of secondary principals in this AISI project. This observation was noted in a number of the school reports and is reflected in the following comment from lead teachers: "Sustainable work needs the support of administration. If administration has not identified the importance of particular professional development work, the work tends to be actively resisted and/or passively ignored." Project 10443

Reasons cited for teacher resistance included their ability to reflect on their current practices and willingness to try something new, the perceived workload involved to change, implementing new programs completely rather than only partially, structuring their day and classrooms differently, and lack of resources.

Collaborative Action – Fullan (2002) coined the 3-6-8 rule which states that it takes about three years to turn around an elementary school, six years to turn around a high school, and about eight years for a whole district. Since AISI is now in its eighth year of implementation, it would seem that the change process is well established.

The more people involved, the longer it takes to bring about change. Small projects involving one or two schools probably require less time than one involving all schools in a large district. An initiative such as AISI that involves all school districts and almost all schools may take longer to demonstrate an impact.

AISI has been successful in helping teachers hone their skills and extend their repertoires of instructional strategies. The initiative has also fostered the development of a new generation of leaders. As AISI coordinators and lead teachers moved on to school and district leadership positions, others assumed AISI leadership. This provides continuity both through better-prepared school and district leaders, and project renewal and fresh ideas.

Sustainability remains challenging because change takes concerted effort and time. Building a critical mass of people who are passionate, committed, flexible, and surrounded by like-minded individuals increases chances that a reform will be sustained. AISI has demonstrated far-reaching change in Alberta schools.

By virtue of being in its third cycle, AISI has already demonstrated that it is sustainable. In the spirit of inquiry, collaboration, and continuous improvement, the initiative strives to continue to learn from its results and practices and to incorporate these lessons into subsequent years and cycles. Recommendations for subsequent cycles include continued focus on learning, ongoing support, knowledge mobilization, evidence, engagement, capacity building, and innovation and research (Alberta Education AISI, 2008).

Conclusion

The Alberta Initiative for School Improvement (AISI) is currently in its eighth year of implementation. This collaborative initiative between government and its partners (teachers, administrators, trustees, parents, and universities) is achieving a common goal – improved student learning and performance (through locally developed and implemented projects that address unique needs and circumstances). Multiple sources of evidence over two cycles of implementation indicate AISI is having a positive impact on student learning, especially as measured by local assessments. As well, surveys indicate that it is having a positive impact on student, parent, and teacher satisfaction.

AISI is in the vanguard of improvement initiatives around the world. Reeves (2005) calls it the "gold standard" of improvement initiatives because it provides student achievement results. Hargreaves and Fink (2006) praise AISI for its focus on student learning, which they call the first principle of sustainability. They further commend the initiative for its trust of and support for schools and teachers to improve themselves.

AISI demonstrates that large-scale innovation in a province/state education system is possible. It consists of change at all three levels of the system: school, district, and province/state. The approach includes both top-down and bottom-up strategies. At the provincial/state level, the partnership and online database system are innovations that support the initiative. AISI provides a clear opportunity to try new things, to take risks. Small specialized projects are more likely to be innovative than large district-wide projects. At the district level, school authorities can be as creative and innovative as they wish. They have choice and flexibility in designing projects that

meet local needs. School staffs have become much more collaborative in finding effective ways to help diverse students meet their learning needs. Table 2 (page 13) identifies the variety of strategies that they used. And participants – partners, teachers, administrators, and others – are actively promoting the knowledge generated by AISI in the service of improving teaching and learning.

The initiative also demonstrates how renewal is built into changing the culture of schools to achieve the goal of improving student learning. Targeted funding provides the means through which staff can engage in capacity building activities, both in the school and at external events such as workshops and conferences. People learn by doing. Teachers are learning to expand their instructional repertoires to engage students and meet the increasing diversity of student needs. Students who are engaged learn more effectively than those who are not. Renewal is also important in accommodating staff changes and refreshing the initiative itself.

One can argue that any initiative that has been around for eight years is being sustained. Elements that contribute to sustainability include the planning and reporting requirements that keep the focus on student learning; a changing culture in which inquiry is valued for the information it provides; collaboration among staff is becoming the *modus operandi* in place of teacher isolation; and teachers and administrators are working together to benefit both the purpose of schooling – student learning – and their own professional needs and actions.

Discussion of innovation, renewal, and sustainability separately does not mean that they do not work in concert. The components of innovation (an initiative, projects, strategies, and knowledge mobilization), renewal (funding, engagement, continuity, and capacity building), and sustainability (planning and reporting, changing culture, and collaborative action) work together to introduce and support ongoing and positive change in the education system.

The education system is complex involving multiple purposes, partners, processes, and outcomes. It adapts slowly to changes in society at large for a number of reasons including inertia, resistance, constraints, and standardization. Changing the culture is important, albeit insufficient. Change needs a purpose. Focusing on the goal – improved student learning – and providing opportunities for teachers and administrators to enhance their skill sets – in projects addressing specific types of learning so they can integrate and sustain strategies that work – are ways to cultivate improvement in the education system. Collecting and using evidence are essential for supporting policies, practices, and decisions.

Notwithstanding what AISI contributes to our understanding of innovation, renewal, and sustainability, there remains the issue of resistance to change. Resistance comes from all who are party to educational change: students, parents, teachers, and administrators. Change is the new constant. Keeping up-to-date becomes increasingly more challenging as advancing knowledge continues to impact every area of life. It is sobering to know that most of what baby boomers learned in schools is now outdated. The challenge to educators is one of embracing change – socially, culturally, technologically, economically, and politically.

AISI can serve as a model to others who wish to introduce innovation into their education systems. It demonstrates the importance of adopting a variety of approaches to renew an initiative to keep it from losing its focus and impetus and to help participants adopt effective strategies to keep them energized and committed to their roles. Finally, AISI models how a large-scale reform initiative can be sustained by providing leadership, continued funding, and ongoing support.

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