

NORTHWEST REGIONAL LEARNING CONSORTIUM 2015-2016 CURRICULUM IMPLEMENTATION & ANNUAL REPORT

Submitted to Alberta Education

December 2016

Karen Egge, Executive Director on behalf of NRLC

Northwest Regional Learning Consortium is one of seven regional consortia in Alberta established to support regional professional development needs in an ongoing, coordinated and cost effective manner.



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ARPDC Beliefs About Curriculum Development

ALBERTA EDUCATION VISION STATEMENT

"The best Kindergarten to Grade 12 education system in the world."

ARPDC (Alberta Regional Professional Development Consortia) is a collective group comprised of seven regional consortia across the province of Alberta, including:

- Northwest Regional Learning Consortium (NRLC)
- Learning Network Educational Services (LN)
- Edmonton Regional Learning Consortium (ERLC)
- Central Alberta Regional Consortium (CARC)
- Calgary Regional Consortium (CRC)
- Consortium provincial francophone pour le perfectionnement professionnel (CPFPP)
- Southern Alberta PD Consortium (SAPDC)

Overarching Understanding

Effective curriculum implementation leads to a change in practice that enhances student learning.

Our pillars

- Effective Collaboration(process)
- Effective Practice (content)
- Effective Adult Learning (context)

Enduring Understandings

We have come to understand:

- Effective curriculum implementation is a shared responsibility for all stakeholders.
- Effective curriculum implementation is developmental and contextual.
- Effective curriculum implementation must be systemic, systematically planned and sustained.
- Collaboration leads to deeper understanding and shared commitment.
- PD is interactive, continuous and reflective.
- Effective adult learning is meaningful, purposeful and provided through a variety of learning opportunities for all stakeholders.

Essential Questions

- What does shared responsibility of all stakeholders look like?
- What are the measures of effective implementation?
- What strategies lead to change in professional practice for enhanced student learning?
- How do you address the developmental and contextual variables of communities to achieve effective implementation?
- What does meaningful and purposeful stakeholder collaboration look like?

ACCOUNTABILITY STATEMENT

The Northwest Regional Learning Consortium Annual Report for the 2014-2015 year was prepared under the direction of the Management Team of the Northwest Regional Learning Consortium and in accordance with the reporting requirements provided by Alberta Education; with financial guidance and oversight by the NRLC agent board, Grande Prairie Public School District #2357.

The results of this report are used, to the best of NRLC's ability, to advocate for quality professional development; and from the point of view of the service provider to work with its partners to develop, implement and assess professional development programs and comprehensive plans that support learning for students' sake. The 2015-16 Annual Financial Statement is submitted as Appendix A to this report.

Dr. Jean Reston Board Chair *Karen Egge* Executive Director

MESSAGE FROM THE MANAGEMENT TEAM CHAIR

Submitted by: Dr. Jean Reston, Board Chair

The one constant we can count on in Education and teaching is change – change in knowledge of the world and change in our understanding of learning. Modern educators constantly seek to provide for more effective ways to meet the learning needs of all students. Assisting teachers and other educational professionals to raise their funds of knowledge and their skills for assisting the learning development of children in schools is the purpose of the Northwest Region Learning Consortium.

NRLC 2015-2016 work presented in this report is thanks to the oversight of Executive Director, Karen Egge, and coordinated by Executive Assistant and Systems Coordinator, Tammie Diesel, and Administrative Assistant Jenn Labrecque, who continue the tradition of delivery of high quality professional development opportunities to the schools in Zone 1. This is no easy task given the geographical size and location of the zone. However, the NRLC continues to take advantage of available technologies and constantly push the possibilities of new communication platforms to bring learning opportunities to the adults who are responsible for the learning of children in the Zone. In spite of the geographical challenges, NRLC has collaborated and partnered with many players to ensure teachers in Zone 1 feel supported in professional skills and knowledgeable about content.

In addition to the professional development offerings to teachers and education professionals in our region, the NRLC staff has also provided major support to two significant provincial professional development projects, FNMI Professional Learning Project and the Elementary Mathematics Professional Learning Project. The professional learning opportunities and resources produced by the projects are impacting instruction throughout the province. Of particular note is the wealth of resources available through the FNMI Professional Learning Project, now completed. With an overdue focus on Indigenous issues, the resources created through the project and available on the ARPDC website are a treasure for classroom teachers. The ongoing Mathematics Professional Learning Project continues to bring new ideas and teaching techniques for math instruction to Elementary school teachers throughout the province.

Each year, the staff of the NRLC meets the new challenges presented to them and consistently delivers quality experiences. The Management Board members are grateful to and wish to thank the NRLC staff, Karen, Tammie and Jenn, for their dedication and extreme hard work in creating the successes of the Consortium.

Message from the Executive Director

Submitted by: Karen Egge, Executive Director

Welcome to the 2015-2016 Combined Curriculum Implementation and Annual Report. As we continue to move forward and recognize the focus on continuous improvement in our professional learning through comprehensive planning and collaboration we are pleased to present a record of the learning opportunities completed to meet the needs of teachers and educators in Northern Alberta also known as Zone 1.

Learning Forward commissioned a Canada study on "The State of Educators Professional Learning in Canada" with Carol Campbell (OISE)as the lead researcher and it can be located at <u>www.learningforward.org</u> The highest priority area identified by teachers for developing their knowledge and practices is how to support diverse learners' needs including attention to diversity, inclusion, equity and poverty. 66% of elementary teachers were likely to view professional development as an opportunity to deepen subject matter knowledge. (page 6 of Executive Summary) I believe we are on the right track in our programming and support of teachers and all those who support student learning in our schools.

I offer my sincere thanks for the on-going dialogue with district personnel, advisory groups, Alberta Education and all our partners as we keep the focus on promoting learning that goes deeper, builds local capacity and leverages promising teacher practice for student learning. We are really pleased with the 65% response rate to participant feedback surveys. We will continue to be intentional on using this data and working to get a better response on the 30 day follow-up feedback.

We continue to welcome change as a catalyst for learning and look forward to the introduction of "*The Guiding Framework for the Design and Development of Kindergarten to Grade 12 Provincial Curriculum*" in the coming year. This document will set a common direction for provincial curriculum development.

The NRLC Management team welcomed the announcement of curriculum implementation support funding as part of the Alberta Education funding manual which will provide support for priorities on an on-going basis.

The recommendations of the Curriculum Implementation Plan from Alberta Education, the 2016 draft Teacher Quality Standards/Leadership Standards and the Truth and Reconciliation Commission will impact our future work and curriculum development and we welcome the opportunity to work collaboratively through effective professional learning design and innovation.

Our NRLC administrative team of Tammie and Jenn continue to do an amazing job and I am proud of the services we provide together for "*Adult Learning for Student's Sake*". We will celebrate "20 years of Professional Learning" as NRLC in 2016-2017 and we look forward to our work together

Who We Are in the North

The Northwest Regional Learning Consortium is governed by educational stakeholders and is represented by the following associations:

Board of Directors

Jen Clevette	. Alberta Teachers' Association (Peace Wapiti SD)
Wendy Kelm	. Alberta School Boards Association (Peace Wapiti SD)
Murray Murran	Association of School Business Officials of Alberta (High Prairie SD)
Ray Sylvester	. Alberta Teachers' Association (Grande Prairie Public SD)
Mark Yurick	. Alberta Teachers' Association
Nick Radujko	. College of Alberta School Superintendents (Grande Prairie Public SD)
Jean Reston (Chair)	. Teacher Education North, GPRC
David Harvey	Alberta Education, Education Manager School Improvement
No Representative	Alberta School Councils' Association

Staff and Consultants

Karen Egge	. Executive Director
Tammie Diesel	. Systems Coordinator/Executive Assistant
Jennifer Labrecque	. Administrative Assistant
Wanda Dechant	. Mathematics/Distributed Learning Technician
Solange Lalonde	. FNMI Professional Learning Facilitator (Consultant)
Geri Lorway	. Mathematics Curriculum Consultant



Mission

Northwest Regional Learning Consortium (NRLC) provides quality professional development that is responsive to its learning community members' needs as they work to enhance student learning.

Vision

The NRLC serves as a catalyst to inspire and enhance active adult engagement in the overall learning process that in turn supports, enriches and improves student learning. The essential work of the Consortium is aligned with provincial priorities, regional needs, and district and school goals so that sustainable, meaningful learning opportunities are available to its learning community members. The Consortium promotes learning and learning connections for the diverse community of adults who share the responsibility for student learning.

Regional Context

In the 2015-2016 school year, NRLC operated with one Executive Director and two administrative support positions. Additionally, Wanda Dechant as part time (.2 fte) High School Mathematics/Educational Technology Consultant; Solange Lalonde as full time Provincial First Nations, Métis, and Inuit Professional Learning Facilitator; and Geri Lorway was contracted as a part time Math Curriculum Consultant. NRLC connected with five Advisory Committees, eight Regional Planning Teams, as well as with numerous contacts from the nine school jurisdictions and regional private and band schools.

- The NRLC region includes nine school districts as well as a number of band, private and charter schools in a large geographical area covering the northern half of Alberta.
- The combination of rural and urban schools makes for a multiplicity of teaching assignments and professional development needs. There are many small schools, multi grade configurations and staff teaching multiple subjects in the smaller schools, thus creating challenges for teachers who deal with 'competing priorities' with new curricula and the need for on-going learning with limited access to professional development dollars and time. Availability and cost for substitute teachers and competing priorities for PD remain a challenge for teachers and districts.
- Distance and scattered locations within the region provides a challenge in providing professional development learning opportunities for teachers within the region. As a result, NRLC continues to provide programming wherever feasible. We use a variety of locations, thereby reducing travel time for participants to attend sessions.
- Three jurisdictions with almost half of all of the teachers are located within one small urban center (Grande Prairie) served by this consortium. These same jurisdictions also serve 45% of all students in the Zone.
- A number of jurisdictions have a high percentage of First Nations, Métis, and Inuit students; some jurisdictions also include Colony and Francophone students.
- A number of on-going initiatives (i.e. zone advisory committees, curriculum coordinator meetings, individual and joint planning meetings with districts) across the region provide opportunities for working together and designing plans that can complement and enrich teacher learning.

Over the past few years, our consortium work and planning has been fine tuned in response to building our knowledge of effective professional development design and meeting the expectations of Alberta Education and School Jurisdiction Business Plans. This past year, with the continued focus on student learning, we have worked closely with several key regional planning teams as well as provincial teams to develop those snapshots of effective student learning.

Information provided to ARPDC Executive Directors by Alberta Education Lead Managers and Directors was utilized in the development of program implementation plans and supports. Conversations and planning meetings provincially and regionally have enabled NRLC to develop plans to coordinate with and complement the work of school districts in the region effectively with resources provided through conditional and pilot grants and sharing of regional expertise and lessons learned.

In the 2015-2016 year, the Curriculum Coordinator meetings had extended time and invitations for dialogue on awareness of Curriculum Design and other initiatives. Our thanks to the Alberta Education team that participated across the province.

It should be noted that NRLC staff and consultants including Karen Egge and Geri Lorway often have individual meetings to refine professional development programs and or design specific sessions based on their requests. We search for ways to be most cost effective and the combination of some grant dollars from the annual implementation grant and from district resources continue to make professional development accessible and job-embedded.

NRLC 2015/16 Regional Plan to Support Curriculum Implementation Summary

The 2015-16 Curriculum Grant (Appendix C) provided the base of our operations in developing and delivering the learning activities for our Zone 1 school jurisdictions and educators. Highlights of this work and outcomes are included in this report; along with particular notes of our expanding partner projects. A primary portion of the grant deliverables is focused on Curriculum support, Inclusive Education, Literacy, Numeracy, and Mathematics. This work is summarized in the attached report, as well as in the data of this report. Plans are underway with local district planning and partnership for the 2016-2017 school year as well.

Regional PD Collaboration Projects

In the 2015-2016 school year the NRLC team worked closely at a school and a jurisdiction level to co-plan and collaborate on effective professional development that met specific needs and initiatives identified by the jurisdictions. These programs, delivered during common district or school-based PD days continue to be an opportunity for embedded PD that creates professional learning communities across districts within a cohort learning environment to create lasting results and connections. These programs are open to Zone 1 teachers and support staff and are regularly subscribed to by those districts within a 250km radius. In the 2015-16 year, approximately 5700 participants took part in the planned sessions.

Alberta Education

Alberta Education is the provincial government department responsible for the delivery of education programs and services for people of all ages. It works with parents, educators, business and industry to create opportunities for Albertans to learn throughout their lives.

Working in Collaboration with Regional and Provincial Partners

Consortia Partnerships

Alberta Regional Professional Development Consortia

The ARPDC are dedicated to promoting student learning and achievement; school improvement; and parental engagement in the educational process through the provision of effective professional development services, at the local, regional and provincial levels.

NRLC Advisory Committees

To ensure the needs of school districts, charter, private and band schools are met, Northwest Regional Learning Consortium collaborates by forming advisory committees which represent stakeholder groups. Advisory committees address the following Alberta Regional Professional Development Consortia goals:

- ✓ Facilitate professional development which supports the effective implementation of the Alberta Education Business Plan and jurisdictional and school council education plans.
- ✓ Facilitate professional development which supports the effective implementation of curricula, including instruction, assessment and student learning outcomes.
- ✓ Promote and support the development of professional development leadership capacity.
- ✓ Deliver professional development based on the identified and emerging needs of education stakeholders.

Curriculum Coordinators

Sheldon Rowe, Superintendent	.Peace Wapiti School Division
Mark Davidson, Deputy Superintendent	.Peace Wapiti School Division
Bob Stewart, Deputy Superintendent	.Peace Wapiti School Division
Paul Bennett, Superintendent	.Peace River School Division
Karen Penney, Deputy Superintendent	.Peace River School Division
Alexander (Sandy) McDonald, Superintendent	.Grande Prairie Public School District
Nick Radujko, Assistant Superintendent, Curriculum Services	.Grande Prairie Public School District
Karl Germann, Superintendent	.Grande Prairie & District Catholic Schools
Jessie Shirley, Assistant Superintendent of Teaching & Learning	.Grande Prairie & District Catholic Schools
Betty Turpin, Superintendent	.Holy Family Catholic Regional Division
Cora Ostermeier, Assistant Superintendent	.Holy Family Catholic Regional Division
Roger Clarke, Superintendent	.Holy Family Catholic Regional Division
Kathryn Kirby, Assistant Superintendent of Inclusive Education	.Ft Vermilion School Division
Mike McMann, Assistant Superintendent of Teaching and Learning	.Ft Vermilion School Division
Laura Poloz Superintendent	.High Prairie School Division
Margaret Hartman, Deputy Superintendent	.High Prairie School Division
Evan Dearden, Assistant Superintendent of Curriculum	.High Prairie School Division
Donna Barrett, Superintendent	.Northland School Division
Don Tessier, Associate Superintendent	.Northland School Division
Lorraine Cardinal-Roy	.Northland School Division
Brigette Kropielnicki, Superintendent	.Conseil scolaire du Nord-Ouest

Inclusive Education Advisory Committee

Karen Chrenek	Peace Wapiti School Division.
Stephanie Ritchie	Northland School Division
Margaret Hartman	High Prairie School Division.
Pauline Ruel-Wyant	.Grande Prairie & District Catholic Schools
Chris Farquharson	.Grande Prairie Public School District
Jim Taplin	Holy Family Catholic Regional Division.
Kathryn Kirby	.Ft Vermilion School Division

First Nations, Métis, and Inuit Planning Committee

Darrell Willier	.Peace Wapiti School Division
Delores Pruden-Barrie	.Northland School Division
Evan Dearden	.High Prairie School Division
Pauline Ruel-Wyant	.Grande Prairie & District Catholic Schools
Shannon Dunfield	.Grande Prairie Public School District

French Language Advisory Committee

The French Language Resource Centre representing thirteen partners including seven school boards: Grande Prairie Public School Division Peace Wapiti School Division Grande Prairie Catholic and District School Division Peace River School Division Conseil scolaire du Nord-Ouest Holy Family Catholic Regional Division High Prairie School Division Académie of Nancy-Metz

Regional Collaborative Learning Teams

Regional Planning Teams collaborated to encourage and maintain professional learning projects and relationships across the region. Some of these projects and teams have been established for a number of years, based on branching out from district and advisory committee work.

Grande Prairie Public School District

- Nick Radujko
- Angela DesBarres
- James Robinson
- Shannon Dunfield
- Chris Farquharson

Greater Peace ATA Local 13

- Wanda Laurin
- Kathy Gall
- Dave Cambridge

Mighty Peace Teacher Convention

- Jen Clevette
- Julie Gummesen

Holy Family Catholic School Division

- Betty Turpin
- Jim Taplin
- Cora Ostermeier

Fort Vermilion School Division & ATA Council

- Kathryn Kirby
- Michael McMann

Northland School Division

- Donna Barrett
- Don Tessier
- Janette Cavanagh
- Lorraine Cardinal-Roy

NRLC 2015-2016 Annual Report and Curriculum Implementation Grant Report

Peace River School Division

- Karen Penney
- Janet Wallentiny
- Janet Mayer

Peace Wapiti School Division

- Bob Stewart
- Sheldon Rowe
- Heather Putio
- Mark Davidson
- Karen Chrenek

Early Learning Collaborative Project

- Elizabeth Bell..... Northern Alberta Family Literacy Regional Network
- Marilyn Boisvert..... Supports to Early Learning and Child Care Programs
- Meranda Ekins South Peace Area Rural Kids Early Development
- Chantel Napier Grande Prairie Catholic & District Schools

NRLC Collaborative Projects 2015 - 2016	Learning Opportunities	Session Total	Registrations
Early Learning Coalition	2	5	480
Early Childhood Conference	1	40	476
Fort Vermilion School Division	4	54	1050
French Language Resource Centre	15	20	210
Grande Prairie Public School District	5	18	497
Greater Peace ATA Local 13 PD Day	1	15	1135
High Prairie School Division	3	3	106
Peace River School Division	4	8	767
Peace Wapiti School Division	33	125	1958
Northland School Division	1	2	64
Northern Gateway Public Schools (Hillside Jr/Sr High School)	1	4	32
North West Special Education Council	2	2	128
Little Red River Board of Education	1	1	200
Treaty 8 Education Conference	1	2	400
	74	299	7503

Collaborative Partnerships and Project success stories are included on page 15 'Highlights and Accomplishments'.

Curricular Areas of Priority 2015-2016

Northwest Regional Learning Consortium plans learning opportunities based on direction from Alberta Education as outlined in grant deliverables and on advice from our region including feedback from advisory committees, district curriculum coordinators, district instructional leaders, district coaches, regional planning teams, session participants, the NRLC Management Team, and other education stakeholders. We strive to collaborate with as many groups as possible to support "adult learning for students' sake".

NRLC had previously completed joint needs assessments with the ATA in 2009, 2011, and 2013. On advice from our Zone 1 stakeholders, the NRLC and the ATA did not develop a survey for 2015 as they expressed an interest in receiving clarity on curriculum direction in this past year. Timing for the next bi-annual NRLC/ATA survey is the spring of 2017.

The *Northwest Regional Learning Consortium Regional Plan to Support Curriculum 2015-2016* was developed and the following priorities were identified:

- 1. **First Nations, Métis, and Inuit:** Support for all levels of school jurisdictions that results in an increased awareness and understanding of First Nations, Métis and Inuit histories, perspectives, and ways of knowing for the purpose of implementing treaty and residential schools education and Truth and Reconciliation Commission recommendations for education.
- 2. **Mathematics / Numeracy:** Support for Kindergarten to Grade12 teachers in helping students develop higher-order thinking skills, (i.e.: reasoning and problem solving). Support for building awareness and understanding of revised learning outcomes and achievement indicators for grades 1-9 for September 2016 implementation.
- 3. Student Learning Assessments: Support for all levels of school jurisdictions in:
 - building awareness and understanding for the implementation of Student Learning Assessments
 - building awareness and understanding for:
 - interpreting information in the reports (individual student report and class report) that are based on the Student Learning Assessment digital interactive questions
 - interpreting the results from the locally assessed Student Learning Assessment Performance Tasks
 - helping teachers build their understanding of student learning through the use of interpreting the results of provincial assessments
- 4. **Competencies:** Support for all levels of school jurisdictions for the implementation of competencies and revised draft competency indicators in existing programs of study by developing an awareness and understanding of how competencies and competency indicators support learning outcomes for student-centered, competency-focused learning. *An Order to Adopt or Approve Goals and Standards Applicable to the Provision of Education in Alberta (Ministerial Order on Student Learning (#001/2013))*.
- 5. Literacy / Numeracy: Support for all levels of school jurisdictions in building awareness and understanding of the revisions to literacy and numeracy definitions, components and elements. Ongoing support for all levels of school jurisdictions for the implementation of literacy and numeracy strategies in existing programs of study.
- 6. Inclusive Education (including ESL, Early Learning, and Leadership Capacity Education): Support for all levels of school jurisdictions in developing increased awareness and understanding needed to implement flexible and responsive learning environments that acknowledge every student's individual learning needs.

Support all levels of school jurisdictions to build capacity for facilitating and implementing best practices in inclusive education to ensure success for all students.

- 7. Career & Technology Foundations: Support for all levels of school jurisdictions for scaling up to implementation of Career and Technology Foundations programs of study using the Alberta Curriculum application by:
 - promoting an awareness and understanding of the Career and Technology Foundations Curriculum
 - supporting the implementation of the Career and Technology Foundations digital Curriculum
 - developing an awareness and understanding of the online Alberta Curriculum application that will support future Curriculum
- 8. Learning Commons Policy: Support for all levels of school jurisdictions resulting in an increased awareness and understanding of the Learning Commons Policy. Support at all levels for those school jurisdictions implementing the Learning Commons Policy
- 9. Other Priorities Related to Provincial Curriculum Implementation: Professional learning support identified as a need by regional consortia or Alberta Education in topics or subjects that are not listed above, provided that this support strengthens the application of the priorities identified in previous years' grants.
 - Assessment
 - Fine Arts
 - Leadership
 - Physical Education / Health & Wellness
 - Technology Integration

The Northwest Regional Learning Consortium provided PD opportunities in the following areas which were covered under the Curriculum Implementation grant. These sessions demonstrate NRLC's ability to meet the diverse regional needs of all stakeholders.

Focus	Number of Learning Opportunities	Number of Sessions Planned	Number of Sessions Cancelled	Number of Participants
Career & Technology Foundations	7	14	2	78
Competencies	17	68	3	1189
First Nations, Métis, Inuit	10	21	1	1631
Inclusive Education	24	178	6	3694
Learning Commons Policy				
Literacy and Numeracy	13	38	1	816
Mathematics	10	55	2	1399
Student Learning Assessments	3	8		142
Other (Assessment, Fine Arts, Leadership, Technology, Phys.Ed./Wellness)	20	148	2	2274
	104	530	20	11,218

Highlights and Accomplishments

Collaborative Project Success!

Greater Peace Local #13 ATA PD Day Project

The NRLC continues to work closely with the Greater Peace Local 13 ATA PD Committee. Relying on existing and new resources and connections, the committee developed a district PD Day featuring Response to Intervention and Transforming School Culture keynotes delivered in a blended format. Additionally, school-based PLC's continue to be an important component of the overall day, with 15 local sessions delivered.

Fort Vermilion School Division Projects

The NRLC continues to work closely with the division team to assist in design and engaging speakers for a number of projects, including supporting division coaches with aligning facilitators with the division priorities of literacy and numeracy and assessment.

"Creating Learners" Professional Development Day. This partnership featured TC² presenters: Giovanna Longhi, Roland Case, Laura Gini-Newman, Warren Woytuck and Hugh Phillips. There was something for every teacher at this excellent professional learning opportunity.

"Google for Education Summit" featured an all-inclusive day with the EdTechTeam.

"Inclusive Education District Day" Featured Les Redick - "Strategies to Effectively Support Children with ADHD in the Classroom"; Colleen Devrayac - Proactive Behavior Supports; Derek Peterson; and Dana Laliberte structured for teachers and support staff.

Peace Wapiti School Division Project

For several years the NRLC has worked closely with the PWSD to support their district in developing professional learning opportunities based on district priorities and goals. Delivered during district pd days, these learning opportunities were developed in a cohort-based model to promote the team and peer-to-peer learning aspect. The key concepts during these days included literacy, math, assessment, critical thinking, inclusive education, project-based learning, technology, early learning, and physical education. Additionally, eight multi-day projects were developed as school and subject based cohorts with an aspect of higher order thinking and assessment building. The Peace Wapiti EdTech team hosted a custom Google Summit in 2016 as well, partnering with us for registration support.

Zone One Education Assistant Conference

The NRLC team worked with two local school districts to design and deliver a comprehensive conference that impacts and influences the professional practices and strategies for EAs in the north Zone 1 area. Educators from seven educational partners, including Band, Métis Settlement, and Charter schools, attended the two day conference. In this third year of conference collaboration, we featured Dr Edmond Dixon and Dr Robin Gibb as keynote speakers, with another 45 breakout sessions for 340 staff each day.

First Nations, Métis, and Inuit Education Conference

In 2015-16, we were advised by the Council of School Superintendents that CASS would be hosting a major provincial conference in October 2016 so our regional group decided to change the format of the Mâmâwîhtowin conference to a two day symposium format in October 2015 and February 2016 to complement the Truth and Reconciliation focus. We were fortunate to have Charlene Bearhead lead the two days of discussion around the ongoing works from across Canada, sharing with jurisdiction partners' different strategies and options for developing stronger roles within their own areas. She was the ideal representative to help everyone become familiar with the Truth and Reconciliation recommendations, as well as the resources available through the University of Manitoba.

Following this symposium work, the NRLC joined the provincial Project of Heart E-Book endeavor. In hosting the first "Boys with Braids" (https://www.facebook.com/boyswithbraidsteachings/) community tour we were able to connect and create local learning resources for the recognition and re-building of cultural roles. We also partnered with the City of Grande Prairie, the United Church, and local school authorities to learn from Reverend Stan Mackay and the role of community in reconciliation. We are currently finalizing video resources from these events and Elder interviews that will become part of the online resources submitted to the Project of Heart Alberta as well as the national Project of Heart.

Early Learning Coalition Projects

The NRLC has continued in three years of support work with ELC planning committee. This year we partnered to bring in Dr. Gabor Mate to speak on the biology of loss and resiliency; and Dr. Deborah MacNamara to speak on making sense of young children and how we can support them for success in schools. Each event included an open community evening presentation for parents and caregivers. Over 240 professionals attended the three days of learning, and almost 230 attended the evening sessions. Work continues with this team for future events that support the early childhood care and educator professionals and the foundational role they hold in the creating a healthy early start in children.

Additional Collaborative Projects

As another facet of our work, we provide Executive Director Program advice with the Mighty Peace Teachers Convention Board. We help provide the context for new curriculum updates, ideas for speakers and sponsorship of specific programs such as Mathematics, First Nation, Métis and Inuit curriculum support, and we partner with the French Language Resource Center to bring in speakers to support French language learning.

Mathematics Curriculum Support Appendix D

As you review the Mathematics report in Appendix D you will note our consultants continue to advocate for sustained intentional time and resources to truly change practice and build on-going capacity. A second part of the report reflects on the opportunity to share the work of the Elementary Mathematics Professional Learning Initiative with the Alberta Mathematics Dialogue group which consists of between 70 and 100 post-secondary mathematics instructors, professors and researchers. We look forward to their feedback on how best to support the generalist teacher in our school systems. Geri Lorway has also included information a provincial study group has developed on spatial reasoning and the importance of building this skill in our mathematics classrooms. NRLC partnered with regional school authorities to provided sub release time for teachers across grade levels to be a part of a learning cohort series facilitated by Geri Lorway (Thinking 101); for the third year. The major focus was understanding the big ideas of Equality in the Curriculum, and Additive and Multiplicative Thinking. The follow up support by school district is key to the success of building capacity and change in practice. Professional Learning also continued with James Tanton at the Grade 7-12 level

SAMPLE RESPONSES from *Mathematics* sessions

An aspect of this learning opportunity that made it meaningful is:

- I enjoyed being able to put the creation of critical thinking questions into practice and the personal feedback from Laura. I will also begin using the word "conjecture" when asking students to make "best guess".
- ✓ Working with others, using critical judgement practices, seeing examples
- ✓ Provided resources and activities I could use in my classroom.
- ✓ Watching the students in the model lesson interact and engage with exploding dots. Having the opportunity to learn something new and watch it in a actual classroom with students.
- ✓ The ability to confer with the grade 6 teachers at my school. Being a grade 7/8 teacher, this made things easier to talk about our implementation and how to make it continuous throughout the three grades.
- ✓ I appreciate being able to work with the materials myself and then going into a classroom and working with the materials with a student. It is the effective hands on learning we integrate into our classrooms.
- I enjoyed being able to go into a classroom and work with a student one-on-one. It was also good that the students were familiar with the math I was learning I wouldn't have really known how to teach it.

One thing I require to further support my professional learning on this topic is:

- ✓ Follow-up sessions. Intentionally implementing critical thinking strategies.
- ✓ Further collaboration with peers.
- \checkmark Time to PLC with my colleagues and perhaps to present to the rest of the school
- ✓ I would love to continue to come to this cohort. It gives me what I need to further my education and my students.
- \checkmark Time to reflect and plan a series of lessons with this topic.

An aspect that might be improved:

- ✓ Laura spoke about how she used the examples in her presentation with students in the classroom. It would be great if there could be videos of how she implements this with the students and see the conversations that arise in the real classroom setting
- ✓ More in depth explanations/examples of how to implement critical thinking into classrooms considering QLE standards.
- ✓ More practical application. How do we fit this ideal (and wonderful) way of thinking into the reality of our schools and classroom
- ✓ Having a focus appropriate to Alberta Education curriculum for all grades targeted.
- ✓ The thing which would improve this PD would be to see every math teacher in the district take the PD and then have to implement the topics into their classes. To make this happen, we need more work done on implementing Tanton's ideas into the curriculum and Grade specific. It also needs to be mandated so there is more continuity in the district.

Zone 1 Regional PD Statistics and Participation 2015-2016

The NRLC planned five hundred seventy-nine (**579**) regional professional development sessions through our Consortium in 2015-16 hosted primarily in Grande Prairie and Peace River, with some sessions offered in High Prairie and High Level upon district request. These locations have proven to be the most readily and easily accessible by participants across our geographical area. Of these sessions, 539 learning opportunities were developed and funded under the Curriculum Implementation Grant and served 11,168 registrants. We continue to develop and participate in innovative steps to provide delivery of PD via online means, including ARPDC initiatives such as Adobe Connect Webinars, Learning Portal curriculum resources, Community of Practices, Wikis, Distributive learning opportunities continue to develop regionally and provincially; as do well-trained and able facilitators.

NRLC continues a trend of planning, developing, and implementing a greater number of learning opportunities, based on identified zone needs and Alberta Education priorities; with fewer cancellations over the past five years due primarily to this more collaborative approach to planning. These learning opportunities continue to be flexible in meeting needs such as delivering to smaller groups, delivering as class support, and delivering online to team groups or community of practices. Many of these opportunities continue on the emphasis of building into long term learning plans and cohorts, as one program is delivered over two or three dates. Very few learning opportunities are organised as a single day delivery as we act on follow-up or repeat requests (i.e., North West Special Ed Council 'Getting into the Green Zone') that come from interest or space.

Over the past few years the NRLC, as well as most of our sister consortia, have moved to online pre-registrations for workshops and conferences. It is the most effective means of ensuring school facilities, for those district PD events, and presenters are best prepared for the day(s). It is especially vital for multi-session conferences or cohort series. This continues to be an effective, yet challenging, piece of our regional operations; and involves building an effective communication and support plan with school staff, IT departments, and district leaders. Pre-registration also impacts the number of cancellations, as we know ahead of time how to approach our partners on low registrations.

The chart below provides a summary of programs by subject area that indicate the variety of ongoing professional learning opportunities offered through this past year. This is an overall summary of programming, the majority of which flows through the Curriculum Implementation Grant.

Alberta Regional Professional Development Consortia (ARPDC)

In order to be consistent in determining participation rates among consortia, ARPDC has developed a PD counting model. The guidelines used by the seven consortia are:

- Half day, full day or partial day sessions count as one day (The time to organize a full day or half day session is the same.)
- Each day of a series counts as one day of PD. Participant numbers are counted for each day.
- Conference over multiple days: each day counts as a day of PD, regardless of the number of contracts and presenters. (a subset of sessions is added in further detail to final count report)
- Conference with multiple sessions in one day still counts as one day.
- Webinars are counted as "one day" due to the time to train facilitators, moderate sessions, develop conversation guides and post archives.

The NRLC further has developed a counting system that more accurately reflects the number of deliveries as a session total within one learning opportunity cohort. Grouping and counting LO's and session by priority gives a more definitive summary and understanding of the consortia work.

ZONE ONE REGIONAL LEARNING OPPORTUNITIES	# of Learning Opportunities	Number of Participants			
2015 - 2016		Face to Face / In Person	Attending via Technology	Total Participants	
Learning Opportunities					
Meetings/Advisory Groups	9	78	5	83	
PD Learning Opportunities	570	11297	521	11818	
Technology Mediated Learning Opportunities					
Synchronous	# of Learning Opportunities	Number of Sites	Total Number of Participants		
NRLC Webinars / Videoconferences/Online Platforms	6	21	52	1	

PD PROGRAMS & PARTICIPANTS

	2011-12	2012-13	2013-14	2014-15	2015-16
Participants	9,092	12,547	12,180	11,604	11,901
Programs Planned	436	395	480	437	579

Five-year comparison of attendance by Zone 1 jurisdictions in NRLC PD. Note that some jurisdiction schools are served by other ARPDC consortia and will appear in those reports. Attendance is influenced by distance and location within the region, weather, travel, and transportation which affects access to some communities. To alleviate these restricting influences consideration is given to the use of online delivery methods such as Adobe Connect webinar or video conference (although VC is becoming an outdated means of delivery); as well as access to the online learning resources on the <u>ARPDC Learning Portal</u>.

For this chart we have included the MPTC sessions and participants as the norm in previous reports.

Meetings have been included in these totals as most are related to programming and will include presentations to the group. Example: FNMI Advisory, Curriculum Coordinators meeting.



Learning Opportunities by Priority or Theme and Registrations

SAMPLE RESPONSES from *Technology* sessions

An aspect of this learning opportunity that made it meaningful is:

- ✓ Very useful, I will try these technologies in my class.
- ✓ Specific examples of usage of tools and technology in the classroom.
- ✓ Some suggestions of websites to possibly check out.
- One thing I require to further support my professional learning on this topic is:
- Time to develop and use these great tools.
- More hands-on opportunities. \checkmark
- More time to develop these tools outside of this day. ✓

SAMPLE RESPONSES from Professional Learning Reflection Survey (30 days following Learning Opportunity)

I applied the new learning with my staff or students. (ie: measure of application)

- A variety of teachers are now trying the tools in their classrooms, therefore the sharing is being a success.
- I have tried out some of the applications with my classes. There are still some I hope to get to at some point throughout the year.
- Shared new resources with grade partner and planning to rewrite unit plans for select science and social units, using new ideas.

SAMPLE RESPONSES from *Competencies* sessions

An aspect of this learning opportunity that made it meaningful is:

- ✓ It allowed time for me share with colleagues and collaborate on projects. We had time to actually incorporate what we have been learning in this PD series.
- ✓ It gave me ideas to think about and implement right away in the classroom. Even if I cannot implement all the ideas at once I know I will be a stronger teacher by considering the information that was presented.
- This learning opportunity allowed me to reflect on the importance of teaching and supporting our students in becoming critical thinkers so that in the higher grades they are capable of being independent.

One thing I require to further support my professional learning on this topic is:

- ✓ Time to develop projects and to collaborate, especially to create cross-curricular projects.
- \checkmark More sessions like this one where working time is built into the process of learning.
- ✓ time to explore new concepts

SAMPLE RESPONSES from Professional Learning Reflection Survey (30 days following Learning Opportunity)

I applied the new learning with my staff or students. (ie: measure of application)

- My teaching was much more deliberate, because I had a purpose and an overarching project that it connected to...it wasn't learning this just to put it away.
- I made a pbl unit and tried it out

SAMPLE RESPONSES from Inclusive Education sessions

An aspect of this learning opportunity that made it meaningful is:

- ✓ An insight on how we as teachers can help physically and mentally engage our students (boys and girls) more effectively throughout class time.
- ✓ Engaging presentation. Meaningful to me as a parent and educator.
- ✓ Loaded with more ideas in keeping children engaged longer.
- ✓ Reinforces the importance of attachment extending love, compassion, expressing all of this.

One thing I require to further support my professional learning on this topic is:

- \checkmark More workshops of similar quality to build on the topic of attachment and trauma.
- ✓ Further reading of material to support what I've heard today and to be able to confidently integrate into my work.
- ✓ I want to learn more about fostering empathy and resiliency.
- Follow-up on the topic of discipline, classroom management and conflict resolution with boys specifically.

SAMPLE RESPONSES from *Professional Learning Reflection Survey (30 days following Learning Opportunity)*

I applied the new learning with my staff or students. (ie: measure of application)

- Improved the physicality (for boys) as well as girls in my classes.
- Coordinating with colleagues so our actions are consistent. Introducing 5point scale.
- used many of the hands on activities that were presented at the conference



- Other includes Federal, Band, Private, Charter, and ARPDC participants
- Band and Métis Settlement school attendance is reflected within the participant's school jurisdiction



SAMPLE RESPONSES from First Nations, Métis, and Inuit sessions

An aspect of this learning opportunity that made it meaningful is:

- ✓ It was a great day of learning.
- ✓ Understanding the "why" residential school. Availability of resources online.
- ✓ Everything, I am looking forward to the next symposium. X2
- ✓ This information needs to be taught and brought to as many people who will listen and take forth the teachings.
- ✓ The booklet and audio-visuals the resources. X11
- ✓ Documentation on history and facts. Current implementation in school and interactions to make/take action.
- ✓ Useful in working with FNMI students. Good games getting students to talk (come out of shell)

One thing I require to further support my professional learning on this topic is:

- ✓ Who, where, how to use information to make professional information delivered to staff, admin, teachers on subject.
- ✓ History on the policies created by government to take over the land from First Peoples in Canada.
- Continued support and information (but I feel this will happen with this workshop which is fantastic).
- ✓ Funding to support local businesses to educate community. Educating community by workshops, land-based teaching and cultural teachings.
- ✓ Continual PD on the same topic so we can keep on growing, networking and building together.

An aspect that might be improved:

- ✓ More information about the assimilation history before residential schools. Because residential school is only a part of the assimilation of First Peoples in Canada.
- ✓ It was great as is! 2 days in a row, twice a year would be awesome!
- ✓ Would have liked more sharing on initiatives that are working to enlighten.
- ✓ Sharing of what others see as reconciliation.
- ✓ Instructions on how to access archival materials.

SAMPLE RESPONSES from Professional Learning Reflection Survey (30 days following Learning Opportunity)

I applied the new learning with my staff or students. (ie: measure of application)

- Shared personal experiences, showed pictures of residential school, talked about and described where it was located in my home town.
- Discussions with both staff and students. What happened? What the impacts on our current students looks like. How can we assist in developing/delivering appropriate programing designed to acknowledge/overcome the stigmas attached to Residential School experiences.
- I have incorporated more FNMI learning with students and staff since October.

Meeting Our Mandate

NRLC's Ongoing Needs Assessments and Stakeholder Surveys

An ongoing needs assessment is carried out throughout the year through NRLC's evaluation process. The program evaluation forms are reviewed constantly and programs are developed to meet those needs.

These evaluation forms answer the following questions:

- What is the quality of the presenter?
- Has the presenter met the learning goals of the session?
- How well did the session meet the needs of participants?
- How did the session influence improvement in the teacher's practice and therefore enhancing student learning?
- Which topics/speakers would participants suggest for future programs?

NRLC continues to use electronic online PD evaluations sent directly to each participant following their learning activity; with continued challenge in securing responses. At the beginning of the year, in some specific learning opportunity forums and projects, and with certain populations or cohort groups, paper evaluations which are completed at the end of each opportunity are used. Developing a common and effective communications plan to increase the return rate continues with each stakeholder conversation as we convey the importance of participant feedback in guiding regional work that meets their needs.

Continuing the practice of all regional consortia, we also distribute a provincially designed follow-up evaluation approximately thirty days after a learning opportunity. This is a simple design, concise three question survey, intended to capture teacher (educator) practice and impact of the professional learning. Our facilitators, consultants, and staff teams offer much encouragement to the participating educators to voice how they are applying new knowledge and strategies into their classroom practice. As we meet our mandate of serving the needs of students, we recognize the need to empower teachers, offering them continual support to sustain that involvement. Effective delivery and processing of evaluations is one tool we can use in this task.

Provincial collaboration is valued but is also a challenge as we encourage use of on-line resources, shared websites and webinars as we continue to provide services and meet our mandate. Regional teachers have increased opportunity to participate provincially, especially as web-based delivery is becoming the norm with Adobe Connect sessions. The following section details the provincial aspects of the NRLC in conjunction with the ARPDC in a format that has been developed and used provincially.

In 2015–16, NRLC received 4,008 individual evaluations out of a possible 6177 (number of participants receiving evaluations) for a return rate of 65%. This level of feedback really guides our future work and we thank all our participants.

Professional Learning Reflection and Needs Assessment

*Distributed immediately following the learning opportunity electronically or paper version during.

PD Satisfaction Results - Cumulative Participant Survey Responses 2015-16: *Quantitative Results –* SAMPLE RESPONSES detailed throughout this report

98% satisfaction with the following:

This professional learning opportunity:

- 1. Contributed to my awareness and/or deeper understanding of the topic.
- 2. Provided opportunities for me to be actively involved in the learning.
- 3. Provided strategies for integration of the learning into my current practice.
- 4. Provided opportunity for me to reflect on my knowledge, skills and attributes about the topic

99% satisfaction with the following:

1. was provided at a reasonable cost.

Qualitative Results – SAMPLE RESPONSES detailed throughout this report

- 1. An aspect of this learning opportunity that made it meaningful is:
- 2. An aspect of this learning opportunity that might be improved is:
- 3. One thing I require to further support my professional learning on this topic is:

Professional Learning Reflection

*Sent to participants approximately 1 month following the learning opportunity (appendix F)

- 1. I shared and/or discussed the new learning with colleagues. (ie: measure of awareness)
- 2. I applied the new learning with my staff or students. (ie: measure of application)
- 3. One thing I observed after applying the new learning with staff and students (ie: observable result)

Throughout this report, you will find **SAMPLE RESPONSES** taken directly from the *NRLC's* **Professional Learning Reflection and Needs Assessment** forms completed by participants following each learning opportunity or the **Learning Reflection** distributed electronically after approximately 30 days.

NRLC Annual Stakeholder Survey

The Northwest Regional Learning Consortium reports annually through a Stakeholder Survey from educational stakeholders, the school jurisdictions we serve. An electronic survey is distributed within Zone 1 to approximately 143 recipients (superintendents, PD Chairs, PD committees, project partners, curriculum contacts, advisory teams), with a 25% return rate from stakeholders. Results of this survey are reported in the accountability measures for each ARPDC goal outlined. NRLC will continue to seek to improve the response rate for the coming year through various measures including focus group discussions, specific jurisdiction conversations and planning, and through CASS meetings. The Executive Director is an affiliate member of CASS and attends the meetings to build understanding and context. The face to face opportunities for conversation and brain-storming are much appreciated as we continue to look at longer term planning now with more sustainable curriculum support funding in the future.

NRLC Accountability Measures

NRLC Zone 1 Boundary Map: Service area is indicated above the black line (generally) in the upper portion of the province.

Zone 1 Jurisdictions

- 1. Grande Prairie Public School District
- 2. Grande Prairie & District Catholic Schools
- 3. High Prairie School Division
- 4. Holy Family Catholic Regional Division
- 5. Northern Gateway Regional Div (west portion)
- 6. Peace River School Division
- 7. Peace Wapiti School Division
- 8. Fort Vermilion School Division
- 9. Northland School Division
- 10. Private, Charter, Federal and Métis Schools

Alberta Public School Districts, School Divisions and Regional Divisions



×

Zone 1* Students Teachers 36,342 *not including West NGRD, Francophone, some Federal and Charter as they are included in other provincial counts

ARPDC GOAL ONE

Facilitate professional development which supports the effective implementation of:

- The Alberta Learning Business Plan
- Jurisdiction and school education plans; and
- Regional School Council plans

OUTCOME 1.1 Work collaboratively through ARPDC, Alberta Education, regional school authority District Contacts and Advisory Committees to establish plans, strategies and opportunities that are responsive to the provincial and locally identified needs in congruence with provincial directions for education. (Deliverable A, C)

OUTCOME 1.2 Demonstrate effective provincial planning through the development of a common consortia Provincial Plan to Support Curriculum Implementation that promotes consistency in learning opportunities. (Deliverable A, B, C)

STRATEGIES Used to Achieve Goal One

NRLC	ARPDC	Partners
Host regional jurisdictional District Contact and Advisory Committee meetings around the key areas identified in the Curriculum Implementation grant 2015-2016.	Hold collaborative conversations with Alberta Education personnel to understand provincial direction and how the consortium may support their work in our region and through regional plans.	Hold meetings with stakeholders (ASCA, ATA) to determine deliverables related to Curriculum Implementation
Hold collaborative conversations with jurisdictional representatives to understand the needs for professional learning based on their Three Year Education Plan.	Hold meetings with key Alberta Education contacts to determine deliverables related to Curriculum Implementation and develop understanding of the Alberta Education Business Plan.	Hold collaborative conversations with stakeholders to understand how the consortium may support their work in the region related to Curriculum Implementation.
Conduct post learning opportunity surveys with participants to help identify additional learning needs	Conduct a common post survey for administration to session participants.	Develop a common needs assessment with ATA to determine stakeholder needs.

OUTPUTS GOAL 1

Performance Measures	Metric	Results Qualitative
Percentage of stakeholders who agree that NRLC PD offerings aligned with needs identified in their plan(s).	Survey of stakeholders	• 91.3% agreed that PD offerings aligned with identified plans.
Number of participants that attended NRLC PD offerings.	Participant Count	 124 learning opportunities 570 planned sessions 14 cancelled sessions 11,813 participants attended NRLC offerings
Satisfaction of stakeholder contacts with Consortium services overall.	Survey of stakeholders	• 100% of program participants were satisfied with services provided by the Consortium
Number of collaborative meetings of ARPDC Executive Directors.		 14 face-to-face meetings; 4 Adobe Connect meetings; 58 guests
Engage in formal/informal conversations with key Alberta Education personnel		Ongoing
Host regional and district contact and collaborative committees to provide direction for planning learning opportunities and to positively impact district leadership and teacher practice	Advisory Committees: Inclusive Education FNMI Advisory French Language Early Learning 8 School Districts	 2 Inclusive Education Advisory Team meetings 4 French Language Advisory meetings as part of the Regional French Language Resource Center FNMI team worked on specific projects in 2015-16 with a focus on Truth and Reconciliation information and community linkages in Grande Prairie region Met with Early Childhood Coalition groups to plan and support parent and professional sessions.
Administer various surveys to gather data to inform future planning.	Bi-annual ATA/Consortium Needs Assessment ARPDC Professional Professional Learning Reflection and Needs Assessment survey Learning Reflection [Follow up] survey NRLC Educational Stakeholder Survey	 Reviewed Joint Survey Administered Spring 2013 results. Administered Greater Peace Local survey Administered following each learning opportunity. Administered approximately 30 days following each learning opportunity. Administered Spring 2015

OUTCOMES GOAL 1

Stakeholder Survey Results

The Consortium was effective in helping us address needs identified in our planning documents.				
2011-12	2012-13	2013-14	2014-15	2015-16
80%	89%	100%	100%	91.3%

Analysis of Outcomes of Goal One

NRLC reviews district three year education plans and discusses priorities for the zone at advisory meetings. Individual meetings with district personnel allow NRLC to more fully understand district context (e.g. release days, PLC times, and district priorities) and include this in zone-wide planning. Individual or small group multidistrict meetings allow NRLC to assist with more in-depth planning, as well as providing information and context that minimizes scheduling conflicts and works to ensure PD that will be timely, relevant and well attended.

NRLC will continue to work on providing ongoing support for the Student Learning Assessment pilot process and ongoing refinements, Curriculum updates, Career and Technology Foundations, and Learning Commons policy. We value the flexibility to continue support for Local, Regional and Provincial priorities.

NRLC offerings align with stakeholders' needs identified through planning documents and consultation. The ability to work with districts to design specific programs across the school year and in many cases collaborate with other school districts is highly valued in our northern context. The goal continues to be reasonable local access and joint district and NRLC program support.

ARLC Annual Stakeholder Survey Respondent Comments

- ✓ A valuable resources for the division and individual teachers alike.
- Being at least 4 hours away from Peace River and a bit longer from GP it is difficult for our teachers to be able to attend the PD. That being said I have seen good sessions offered and I do know some teachers made it out to sessions. I believe that the Consortium is essential to providing PD would just like to see our most northern areas able to have a bit more PD offered at least in Peace River and on days like Fridays or Mondays as then we only need one day out of the classroom rather than extra travel days.
- ✓ I appreciate the comprehensive programming offered.
- ✓ I appreciate the flexibility to work with our district plans and priorities. Keep working on more across district specific learning opportunities.
- ✓ I believe we have a good working relationship with the Consortium and look forward to working more closely with them.
- ✓ Keep up the great job and thank you for all your support!
- ✓ The NRLC has worked collaboratively to help meet our needs.
- ✓ The website makes it difficult to access session information.
- ✓ Very helpful team of ladies in the Grande Prairie office, I appreciate their hard work.
- ✓ Thanks to the quick and efficient service, Tammie and Jenn are amazing.

ARPDC GOAL TWO

Facilitate professional development which supports the effective implementation of curricula, including instruction, assessment, and student learning outcomes.

OUTCOME 2.1 Develop processes, tools and resources to support school authority implementation and for the collection, tracking and reporting of 'evidence' including the change in culture required for the implementation of the policy changes as envisioned by Inspiring Education. (Deliverable A, C, E)

OUTCOME 2.2 Provide scheduled professional learning sessions in the following areas: (Deliverable A) • Curriculum Redesign; intent, competencies, literacy and numeracy benchmarks, curriculum standards • Student Learning Assessments (SLA) • First Nations, Métis, and Inuit • Mathematics • Inclusive Education • Career and Technology Foundations • High School Credentialing • Learning Commons Policy Other emerging regional and provincial needs

NRLC	ARPDC	Partners
Work with and model the use of "A Guide to Comprehensive Professional Development" and "A Guide to Support Implementation: Essential Conditions."	Work with and model the use of "A Guide to Comprehensive Professional Development" and "A Guide to Support Implementation: Essential Conditions" to support jurisdictions in curriculum implementation.	Work with and model the use of "A Guide to Comprehensive Professional Development" and "A Guide to Support Implementation: Essential Conditions" to understand how the consortium may support stakeholders' work related to curriculum implementation.
Develop plans and processes that reflect change management elements and cultural shifts required for transformational change as envisioned in Inspiring	Work towards developing provincial plans and processes that reflect change management elements and cultural shifts required for transformational change as envisioned in Inspiring Education.	Work with stakeholders to understand how the consortium may support provincial plans and processes that reflect transformational change as envisioned in Inspiring Education.
Provide professional learning opportunities to support curriculum implementation based on regional needs.	Provide consortia support in developing learning opportunities to support curriculum implementation based on consortia expertise.	Work with stakeholders to align learning opportunities to support curriculum implementation.
Assist educators with understanding components of new curriculum and their roles and responsibilities in implementation.	Assist consortia with understanding the components of new curriculum and their roles and responsibilities in implementation.	Assist partners with understanding the components of new curriculum and their roles and responsibilities in implementation.
Establish communities of practice based on related research and/or field experts	Support communities of practice based on related research and/or field experts.	Communicate with partners the available communities of practice in the region and province.

STRATEGIES Used to Achieve Goal Two

OUTPUTS GOAL TWO

Performance Measures	Metrics	Results
Percentage of stakeholders satisfied that NRLC facilitated PD supports for effective implementation of curricula.	Survey of educational stakeholders	100% of district contacts were satisfied that NRLC facilitated PD supports for effective implementation of curricula
Percentage of participants satisfied that NRLC sessions influenced their practice.	Professional Learning Reflection submitted by session attendees 30+ days following the learning opportunity. (#1)	98% of PD program participants were satisfied that sessions influenced their practice
Overall percentage of school authorities having access to online materials created by ARPDC and/or NRLC.		100% of districts have access
Number of sessions and participants attending learning opportunities in the following areas: • Competencies • Student Learning Assessments • First Nations, Métis, and Inuit • Mathematics • Inclusive Education • Career & Technology Foundations • High School Credentialing	Registration data LO – Learning Opportunities S – Sessions R - Registrants	 17 LO / 68 S / 1189 R 6 LO / 16 S / 382 R 10 LO /21 S / 1631 R 17 LO /68 S / 1189 R 10 LO /55 S / 1399 R 24 LO /178 S / 3694 R 7 LO /14 S/ 73 R N/A
 Learning Commons Policy Other emerging regional and provincial needs 		 1 S planned but cancelled 20 LO / 148 S / 2274 R
Overall percentage of participants satisfied that they were provided opportunities to be actively involved in the learning.	Professional Learning Reflection and Needs Assessment survey administered immediately following the learning opportunity. (#2)	98% of PD program participants were satisfied that sessions provided opportunities to be actively involved in the learning.

OUTCOMES GOAL TWO

Stakeholder Survey Results

The Consortium was effective in helping us meet emerging PD needs, outside of those identified in our planning documents.				
2011-12	2012-13	2013-14	2014-15	2015-16
76%	89%	100%	100%	100%

Analysis of Outcomes of Goal Two

The high level of collaboration in Zone One allows for joint planning that meets the needs of multiple school districts, often at the same event. NRLC aims to work with PLC groups and other clusters of teachers, mindful of district calendars and other regional considerations. We are also noting greater capacity of districts to use their own staff and support them in PD roles. Student Learning Assessments (SLA) are in the second year of pilot. Alternate delivery and recording/caching of sessions for anytime/anyplace PD for teachers is also being utilized. The Mathematics in-service support is an important part of building sustainable leadership capacity.

One of our goals is to provide opportunity for a variety of job embedded learning opportunities, designed in collaboration with educators at a school and district level. The design of PD is evolving to include the development of online learning opportunities that can be accessed by school based instructional leaders, coaches and individual teachers. Learning about how to design online learning includes experiences with developing video, archived webinar conversation guides and managing the production of these learning opportunities. This job embedded learning may involve the use of a variety of technology mediated learning opportunities, as well as direct mentorship and support for teacher coaches through cohorts. Our work with a Regional Cohort group is helping share and develop knowledge and practice and using provincially developed tools and learning guides. Peer learning and conversations across cohort groups continues to be time and resources well invested as we bring new people into the groups and in some cases alumni staff go into central office curriculum support positions.

Math Support in Grande Prairie Catholic School District

(With support from the NRLC)

Submitted by Alicia Burdess, Numeracy Lead Teacher, Grande Prairie and District Catholic Schools

Dr. James Tanton – James worked with our high school math teachers for two years. His demonstration lessons with students and teachers were very powerful in terms of building philosophy and pedagogy. He was in for six full days. We have further supplemented this support with our Math Coach observing implementation of learning, offering feedback and demonstration lessons in all of the teachers' classrooms. We have also provided our teachers with James Tanton's math resources (in print and on-line) as well as collaboration time to work together and plan for students.

Jo Boaler Book Study – the principals in our district have been participating in a book study of the book <u>What's Math Got to do With it?</u> by Jo Boaler lead by our Assistant Superintendent of Teaching and Learning. Jo Boaler's research is on students learning math in schools. It is linked to current brain research, which strongly emphasizes the need to continue to change how we view, teach, and live mathematics.

Dr. Peter Liljedahl – Peter was in for a Professional Development Day last May to work with all of the teachers in St. Joe's on "Building a Thinking Classroom". The day was full of learning experiences, research, and discussion. We are planning to have him back for three days this winter to deepen this learning with the high school math teachers.

ARPDC GOAL THREE

Coordinate, broker, and act as a referral center to assist stakeholders to access available professional development resources.

OUTCOME 3.1

Collaborate with, share expertise and resources with, and secure the resources and services of other professional learning providers and stakeholders in the planning and developing professional learning opportunities for stakeholders (e.g., AAC, 2Learn, ATLE, Galileo, Alberta post-secondary institutions, ATA, TC2, CASS, RCSD) (Deliverable F)

STRATEGIES Used to Achieve Goal Three

NRLC	ARPDC	Partners
Identify regional learning needs that could be met by collaborating with professional learning providers and stakeholders.	Identify provincial learning needs that could be met by collaborating with professional learning providers and stakeholders.	Identify regional and provincial learning needs that could be met by collaborating with professional learning providers and stakeholders.
Explore potential partnerships and collaboration opportunities with professional learning providers and stakeholders through discussions and meetings.	Explore potential provincial partnerships and collaboration opportunities with professional learning providers and stakeholders through discussions and meetings.	Explore potential partnerships and collaboration opportunities with stakeholder partners through discussions and meetings.
Design learning opportunities with other professional learning providers to respond to regional needs.	Design and deliver professional learning opportunities provincially that capitalize on the resources of partners.	Design and deliver professional learning opportunities that capitalize on the resources of partners.

OUTPUTS GOAL THREE

Performance Measures	Metrics	Results	
Percentage of stakeholders accessing NRLC services that were satisfied	Survey of educational stakeholders	96.1% of district contacts accessing NRLC services were satisfied	
Overall number of sessions provided through partnerships		• 14 LO / 282 S /5409 R	
Number of Conferences/Symposiums supported through partnerships		 PWSD Google Summit FVSD Google Summit FVSD District PD Days (3) Early Childhood Conference Little Red River BOE & Treaty 8 Teacher Conference FNMI Symposium CASS Conference Education Assistant Conference FNMI Spring Gathering GP Summer Numeracy 	

OUTCOMES GOAL THREE

Stakeholder Survey Results

The Consortium's coordinating, brokering and or referral services were effective in helping us access PD				
resources.				
2011-12	2012-13	2013-14	2014-15	2015-16
80%	89%	100%	96.1%	100%

Analysis of Outcomes of Goal Three

The Northwest Regional Learning Consortium is working diligently to meet the needs of Zone One stakeholders. It is evident by the number of professional learning opportunities held, the number of active grants, and the number of meetings that NRLC staff is involved in that we have increased our output to a great degree. We are pleased to report increased engagement and planning programs with Early Childhood Coalition partners. The expanding work as ARPDC provincial project leads continue to provide more access to quality learning programs.

There is an increasing expectation provincially that NRLC/ARPDC will partner, broker and plan collaboratively with a variety of PD providers beyond our ARPDC partners in order to develop coordinated and comprehensive learning opportunities across the province. Regionally, motivation to plan more cooperatively and collaboratively in order to share resources and establish learning communities that span districts is becoming more evident. NRLC will continue to actively support regional ATA Teachers' Conventions, Specialist Councils, and ATA locals by sponsoring presentations, providing information, and attending learning opportunities.

NRLC coordination, brokering and referral services are responsive to stakeholder needs. Our school jurisdictions each have specific challenges that can be met through collaboration with and through NRLC and long-term planning and commitment. We need an extended period of time to really set results on the investment of Literacy and Numeracy supports as an example.

Challenges in Professional Development Learning Opportunity Attendance

As a consortium, we have reviewed best practices in adult learning, and investigated with our jurisdictions to design learning plans which will be responsive to the needs of individual teachers, schools, and jurisdictions, delivering professional learning in such a way as to create learning communities. We will continue to develop online professional development resources for educators, as appropriate, that allow for anytime, anyplace and any pace access to professional development. *The challenge continues to be support to use those resources and we will continue to work with Districts to build awareness and capacity. Our ability to deliver on district and PLC days is helping decrease the barrier of teacher away from the classroom and sustainable numbers for meaningful learning.*

Our ability to stretch PD resources has always been a challenge in the large geographical region NRLC serves. Travel costs to bring in presenters are higher than in central regions, and even regional access requires teacher travel and sub release. The use of technology is an option, but it is not less expensive in the developmental stages. We will continue to offer more sessions at the district level and through PD days and conventions. The development of teacher-coaches is expanding the reach of curriculum specialists and will be part of our comprehensive planning.

APPDC GOAL FOUR

Deliver professional development based on the identified and emerging needs of educational stakeholders.

OUTCOME 4.1 Work collaboratively with school districts, teachers and regional advisory committees (comprised of representatives from school authorities and others as appropriate) to develop plans, strategies and opportunities to meet locally identified needs in congruence with provincial direction.

OUTCOME 4.2 Work collaboratively with ARPDC to develop plans, strategies and opportunities to meet provincial identified needs in congruence with provincial direction.

OUTCOME 4.3 Work collaboratively with Alberta Education staff to develop plans, strategies and opportunities to meet provincial identified needs in congruence with provincial direction.

NRLC	ARPDC	Partners		
Develop professional learning opportunities based on identified jurisdictional needs through various advisory committees.	Work collaboratively with Alberta Education staff to understand provincial emerging needs.	Work collaboratively with partners to understand regional emerging needs.		
Plan and develop a wide range of professional learning opportunities based on identified needs through the use of emerging technologies for adults to learn synchronously and asynchronously. (face to face, online,)	Work collaboratively with ARPDC to develop professional learning opportunities based on provincial emerging needs.	Work collaboratively with partners to develop professional learning opportunities based on regional emerging needs.		
Identify feedback mechanisms to determine needs and impact of professional learning opportunities.	Use a common post survey with session participants to determine needs and impact of professional learning opportunities.			

STRATEGIES Used to Achieve Goal Four
OUTPUTS GOAL FOUR

Performance Measures	Metrics	Results
Number of learning opportunities (*all formats) that were planned and delivered to support identified and emerging needs of educational stakeholders.	Registrations received	124 learning opportunities / 570 sessions were planned and delivered 11,772 participants
Number of learning opportunities (all formats) that were planned and cancelled.	Planned sessions cancelled	20 learning opportunities planned and cancelled
Overall percentage of participants satisfied that they increased their awareness and/or deeper understanding of the topic.	Professional Learning Reflection and Needs Assessment *Distributed immediately following the learning opportunity. (#1)	92% satisfaction
Overall percentage of participants satisfied that they were provided strategies for integration of the learning into their current practice.	Professional Learning Reflection and Needs Assessment *Distributed immediately following the learning opportunity. (#3)	98% satisfaction
Overall percentage of participants satisfied that they were provided opportunities to reflect on their knowledge, skills and attributes about the topic.	Professional Learning Reflection and Needs Assessment *Distributed immediately following the learning opportunity.(#4)	100% of district contacts indicated satisfaction that NRC's PD offerings aligned with their identified plans and emerging needs Descriptions and testimonials noted throughout Annual Report.
Percentage of stakeholders satisfied that NRLC was effective meeting emerging PD needs, outside of those identified in planning documents.	Number of District Teams & Meetings	7 District Planning Teams utilized 37 District Meetings held 124 learning opportunities/ 231 sessions were planned in collaboration with Zone 1 Districts 5737 participants
District Collaboration	Number of Collaborative Projects	Collaborative Projects Planned 74 LO's / 299 S / 7503 R

OUTCOMES GOAL FOUR

Stakeholder Survey Results

PD facilitated by the Consortium supported effective implementation of curricula.					
2011-12 2012-13 2013-14 2014-15 2015-16					
84% 84% 100% 100% 100%					

Analysis of Outcomes of Goal Four

The Northwest Regional Learning Consortium tracks district requests and participation through website reports which gives a clear indication that identified and emerging needs of educational stakeholders are being met.

Districts request sessions using distributed learning technology when a key expert is not available to come to the region. Follow-up webinars have been offered with limited success. These sessions help alleviate travel and time considerations for teachers attending PD. NRLC is working to provide leadership to districts. Teachers are experiencing the power of collaboration through Moodle, Google and Wiki sites. Linking and working with teachers in another part of the province or world is now possible and highly encouraged.

The NRLC will enhance and continue to explore a more coordinated, collaborative and comprehensive approach to informing and planning professional learning. The development of shared learning guides to support initiatives across the province is working well. Supporting and coordinating programming opportunities with local district teams, ATA specialist councils, and ATA Convention Boards will continue to be a priority. The Executive Director values the opportunity to meet regularly with District staff to understand, plan and co-create professional learning opportunities to support the Programs of Study and Alberta's vision for education.

Alberta's ongoing curriculum update and refresh process will continue to call out for the development of more inquiry-based learning and critical thinking skills as both instructional and learning tools. We will work with our Districts and Alberta Education to design learning frameworks and opportunities to support the development of the competencies and intentionally embed them into our revised programs of study and professional learning opportunities.

NRLC continues to support and promote availability of embedded professional learning opportunities that are accessible to teachers in a variety of ways based on feedback from educators regarding preferred methods of learning. We are looking forward to more direct curriculum support through the recruitment of a NRLC Curriculum Coordinator for the 2016-2017 school year.

ARPDC GOAL FIVE

Promote and support the development of professional development leadership capacity within my organization.

OUTCOME 5.1 Develop collaborative learning opportunities in the following areas with a focus on building leadership capacity within: (Deliverable A) • Competencies, literacy and numeracy benchmarks, curriculum standards • Student Learning Assessments • First Nations, Métis, and Inuit • Mathematics • Inclusive Education • Career and Technology Foundations • High School Credentialing • Learning Commons Policy

OUTCOME 5.2Develop collaborative learning opportunities to augment leadership capacity in support of emerging jurisdictional needs. (Deliverable C)

STRATEGIES Used to Achieve Goal Five

NRLC	ARPDC	Partners
Identify jurisdictional needs	Work collaboratively with Alberta	Work collaboratively with
through various advisory	Education staff to understand	partners to understand regional
committees.	provincial emerging needs	emerging needs.
Plan, develop and facilitate a wide range of professional learning opportunities and/or resources	Work collaboratively with ARPDC to plan and develop professional learning opportunities and/or	Work collaboratively with partners to develop professional learning opportunities and/or
based on identified needs.	resources based on provincial	resources based on regional

OUTPUTS GOAL FIVE

Performance Measures	Metrics	Results
Percentage of stakeholders satisfied that the efforts of the NRLC contributed to the development of professional development leadership capacity	Survey of educational stakeholders	90.5% of stakeholders responded that they were satisfied with the efforts of NRLC to develop professional development leadership capacity in a number of areas.
Number of sessions provided for developing leadership capacity	Registrations	5 LO / 52 S / 1014 R
Number of learning sessions to support identified emerging jurisdictional needs.	Registrations	13 LO / 41 S / 721 R

OUTCOMES GOAL FIVE

Stakeholder Survey Results

The Consortium has contributed to the development of PD leadership capacity within my organization.					
2011-12	2011-12 2012-13 2013-14 2014-15 2015-16				
79% 84% 100% 100% 90.5%					

Analysis of Outcomes of Goal Five

NRLC completed a joint needs assessment with the ATA in 2009, 2011, and 2013. We have held off for the next bi-annual period based on advice from our region on getting clarity on curriculum direction before proceeding. Social Studies and Inclusive Education surveys have been circulated through CASS. Districts continue to build capacity with learning/instructional coaches through collaborative projects and planning. The focus on building leadership through learning cohorts continues. We plan to develop a joint needs survey for early spring of 2017.

SAMPLE RESPONSES from Leadership sessions

An aspect of this learning opportunity that made it meaningful is:

- ✓ As an educator, there are many opportunities in my day to have Fierce Conversations and now I have skills to make those meaningful Fierce Conversations.
- ✓ I really appreciated Mike Heckbert's eloquence at getting his point across. He is super smart, thoughtful and wise beyond his years. I thoroughly enjoyed listening to him present
- ✓ The information of the program details, video examples, definitions, protocol paired with the hands on part of the afternoon allowed for more confidence walking away from the two days.
- ✓ Real life examples of how to deal with various situations
- ✓ The case studies really made the learning applicable to reality.
- ✓ The information I learned will help me identify violent threat risks within our school.
- ✓ The openness of the presenter's throughout, and the personal stories they shared.

One thing I require to further support my professional learning on this topic is:

- ✓ As with anything, practice and refinement. Continue to learn and make adjustments as needed as well as to adhere to guidelines.
- I wish it would have been a bit more practical in perhaps developing a bank of good interview questions specific to hiring educational professionals.
- ✓ Information on who to contact for a stage 1 response from the RCMP if our school does not have an SRO.
- ✓ I do not feel prepared to participate in a VTRA. I almost feel like I would need to do a 'mock' VTRA where all participants at each table have different roles and information to share. This experience would allow participants to go through the steps and have feedback from the instructors.
- ✓ Experience!
- ✓ Putting into practice my learning refresher courses might be an idea with walking through examples for possible VTRA cases.
- ✓ The session provided a great deal of info. More info on the actual steps in a VTRA meeting and stage 1 process would have been nice. The steps were not explained or went over before practice game.

SAMPLE RESPONSES from *Professional Learning Reflection Survey (30 days following Learning Opportunity)* **Please describe what you did or tried since the learning opportunity**

- I had more thorough and comprehensive discussions around the VTRA process and its purpose.
- Higher comfort level based on understanding the process and purpose.
- The information was shared at year end Admin meeting. More change will happen in the upcoming year

ARPDC GOAL SIX

Provide stakeholders with access to professional development at a reasonable cost. Consortia offer programs at a reasonable cost.

OUTCOME 6.1 Consortium will provide professional learning opportunities at a reasonable cost to participants.

STRATEGIES Used to Achieve Goal Six

NRLC	ARPDC	Partners
Budget funds from grants to offset participation costs for learning opportunities.		
Make fiscally sound decisions regarding operating costs for Consortium.		Collaborate with partners to offer cost recovery services that are reasonable for participants.
Develop fiscally sound processes to manage grant funds.	Distribute grant dollars in support of learning through transparent formulas exhibiting fair and equitable distribution.	

OUTPUTS GOAL SIX

Performance Measures	Metrics	Results
Percentage of stakeholders agreeing that services are provided at a reasonable cost	Survey of stakeholders (#7)	100% of district contacts were satisfied that NRLC met this goal.
Percentage of stakeholders agreeing that NRLC provided good value for the grant dollars they were proved to support implementation of curricula	Survey of stakeholders (#4)	100% of district contacts agreed or strongly agreed that this performance measure was met.
Percentage of session participants agreeing that the session cost was reasonable	Professional Learning Reflection and Needs Assessment distributed electronically or in hard copy following each event. (#5)	99% of program participants were satisfied that session costs were reasonable

Financial Sustainability

We welcome a major shift in curriculum support sustainability through the direction that will be provided in the 2016-2017 funding manual Section 6.21. The ability to plan over an extended period of time and hire contractors or secondments to meet the priorities significantly improves our service to our region and the province.

We continue to explore other opportunities where teachers are gathered (Teachers' Conventions, ATA Specialist Council Conferences) to provide quality professional development.

OUTCOMES GOAL SIX

Stakeholder Survey Results

The Consortium provided good value for the grant dollars they were provided to support implementation				
of curriculum.				
2011-12	2012-13	2013-14	2014-15	2015-16
84%	89%	100%	96.1%	100%
The Consortium services are provided at reasonable cost.				
2011-12	2012-13	2013-14	2014-15	2015-16
84%	89%	100%	100%	100%

Analysis of Outcomes of Goal Six

NRLC strives to provide access to sessions in locations where usually at least three jurisdictions would be within a two hour drive. Webinars are developed provincially or with other educational stakeholders and the virtual access is well received although many are after school. Delivery of learning opportunities using technology requires greater preparation, organization, technical support and equipment testing on the part of the presenter and organizers. The best programming happens when the district and/or school can have the professional learning opportunity or expert available in their time and place-whether that is a district PD day or PLC scheduled time.

Northwest Regional Learning Consortium and the Board of Directors, is committed to the provision of technology mediated learning and technology implementation support for our teachers. NRLC retains the services of one part-time Technology Support consultant and our office staff has grown in their ability to support Adobe connect, Skype and Google hangout. School jurisdictions in our region and indeed Alberta Education have come to expect and even rely on the availability of technology mediated learning options and technology support for implementation.

NRLC provides professional development at a reasonable rate through grant allocation and district collaboration and on occasion as a full cost-recovery learning opportunity.

NRLC as ARPDC Grant Lead



First Nations, Métis, and Inuit Provincial Professional Learning Project 2013-2016

Northwest Regional Learning Consortium Executive Director, Karen Egge, served as the Alberta Regional Professional Development Consortia (ARPDC) lead for the **First Nations, Métis, and Inuit Provincial Professional Learning Project** for the past three years. This project has created the opportunity to bring the Inspiring Education vision into action through Learning to Be, Learning to Know, Learning to Do, and Learning to Live Together. One example of this is a joint project with Parks Canada where federal financial support was provided for twenty-five (25) teachers to gather at the Palisades Stewardship Education Centre in Jasper National Park, with the purpose of creating the "The Teachings of the Mountain People" teacher resource. The Teachers helped build the resource based on their grades 6-9 classroom requirements ad curriculum.

We are pleased to present the findings of this work after years of collaboration, study and action research with eight pilot school authorities. The full report is available on <u>www.fnmiprofessionallearning.ca</u> The report reflects the intentional systemic work that is required to engage within communities to build capacity within their systems to meet the needs of all students through professional learning. Resources, including video clips of districts sharing their journey-the challenges and the new promising practices, facilitation tools to create jurisdictional learning space and action plans and an extensive digital resource base through Moodle and Google platforms to bring relevant and appropriate materials into their district classrooms.

We have designed an interactive website and guiding documents that will guide the users to resources and materials that empower educators to build their capacity, engage in learning, and create paths for success in their professional learning journey.

The recommendations ask us to continue to build the capacity of all our people through strong healthy relationships, to model the attributes of an engaged thinker and ethical citizen while engaged in understanding and honouring First Nations, Metis, and Inuit perspectives, to build curriculum based on historical events and current contextual realities that impact our communities, and to build our teacher and educator capacity so that all Albertan will learn together. Our sincere thanks to the eight (8) pilot district key contacts, to our Elders and Wisdom Keepers across the province, and to Solange Lalonde as Learning Facilitator lead.

We have provided the Executive Summary (pages 5-13) from the full report as Appendix C.



Elementary Math Professional Learning is a project designed to enhance teacher understanding of math content, conceptual relationships, instructional practices, formative assessment practices, and teacher-parent communication.

Elementary Mathematics Professional Learning Project 2015-2017

The Alberta Regional Professional Development Consortium have accepted a grant support Elementary Mathematics Professional Learning. Northwest Regional Learning Consortia Executive Director Karen Egge will lead the work with co-leads Madeleine Lemire and Gerry Varty/Pat Bohnet over the next two years. The purpose of this project is to work with a variety of other partners, including the Alberta Teachers' Association (ATA), the Alberta Assessment consortium (AAC), as well as post-secondary professors to:

- Develop and deliver six comprehensive learning modules, each to support teachers in the effective implementation of the current Alberta Kindergarten to Grade 9 Mathematics Program of Studies.
- Teachers will have access to learning opportunities (scheduled or just-in-time, face-face, module-based or technology-mediated with materials archived past June 2017.
- The core goals this project aims to provide include:
 - Skills in Assessing Mathematical Content
 - How Learners Interact with Pedagogy
 - Pedagogy Content Knowledge
- Woven into these modules will be building teacher capacity for their selection and use of resources and Teacher-parent communication promising practices.

Appendix D provides a summary of the work completed in Year one. We continue to go deeper with refining the materials on the website <u>http://learning.arpdc.ab.ca</u> and assisting District leaders to use the materials and contribute to the on-going Elementary Mathematics body of knowledge, researched promising practices and professional teacher capacity and confidence with the K-9 Program of Studies.

Introduction to Appendices

The following reports represent the business aspect of the Northwest Regional Learning Consortium. NRLC makes every attempt to act upon, and report upon the grant deliverables as designated by Alberta Education.

A. ARPDC 2015-2016 Provincial Professional Development

The Alberta Regional Professional Development Consortia (ARPDC) is the term regional consortia use to highlight collective provincial "adult learning for students' sake" learning opportunities. The ARPDC is representative of the collective work of the regional Executive Directors and their teams, who report to their respective boards and provide service to school authorities across designated regions. This report captures the data of all provincial initiatives

B. NRLC 2015-2016 Audited Financial Statements

The audited financial statements are a complete and accurate reflection of the ongoing business operation NRLC. We continue to provide and act on accurate budget data, and strive for reasonable program costs.

C. 2013-2016 Provincial First Nations, Métis, Inuit Professional Learning Project Summary Report

A summary report of the work completed under this grant project in the 2014-15 year is attached to provide a global overview of the NRLC work, as it relates to the project management and overall action by the Executive Director.

D. Mathematics Implementation Project Summary Report

A summary report of the work completed under the umbrella of Mathematics, Numeracy and Literacy under the Curriculum Implementation Grant in the 2015-16 year.





Appendix A



Coordinated, Collaborative, Comprehensive Provincial Professional Development Leadership

The Alberta Regional Professional Development Consortia (ARPDC) is the term regional consortia use to highlight collective provincial "adult learning for students' sake" learning opportunities.

The system of Alberta regional professional development has operated since the mid 1990's with considerable success and has grown both in quality, influence and impact on educators across the province as an exemplary model for effective and efficient delivery of professional development to various education stakeholder groups based on common Consortia goals:

- to **facilitate** professional development which supports the effective implementation of components of:
 - the Alberta Education Business Plan
 - Jurisdiction and school education plans
 - Regional School Council priorities
- to **facilitate** professional development which supports the effective implementation of curricula, including instruction, assessment, and student learning outcomes,
- to **coordinate**, **broker**, **and act** as a referral centre to assist stakeholders to identify available professional development resources,
- to **deliver** professional development based on the identified and emerging needs of educational stakeholders,
- to **promote and support** the development of professional development leadership capacity, and
- to **provide** educational stakeholders with access to professional development at a reasonable cost.

The ARPDC is representative of the collective work of the seven regional Executive Directors and their teams, who report to their respective boards and provide service to school authorities across designated regions.

ARPDC provides in-person, as well as synchronous and asynchronous, technology-mediated learning opportunities to support adult learning, relying on consultation from the region to ensure professional development program designs support participants' and school authorities' context. Programs are based on our expertise and knowledge of effective professional learning design and delivery, aligned with the Alberta Programs of Study and are research sound.

Supporting Curriculum Implementation Through Technology Mediated Learning

Through 2015—2016, Alberta educators continued to access learning opportunities as a result of technology tools that facilitated the distribution of learning. Synchronous learning opportunities provided in-person access via webinars, webcast, and videoconference.

Synchronous			
Webinars	113 webinars	4,041 webinar participants 5,809 views of archived webinars	
Video-Conferences	6 sessions	97 participants in person 522 participants at remote sites	
Technology-Mediated meetings (VC, Skype, Adobe Connect, teleconference)	128 meetings	802 participants	

A provincial ARPDC Learning Portal has been active for six years and houses many opportunities for educators to find a variety of resources, strategies and ideas for implementation of the Alberta curriculum. (http://learning.arpdc.ab.ca)



As well, to assist educators with implementation of curriculum, ARPDC develops professional development resources to provide ongoing, job-embedded support to nurture the growth of all educators and "*continue the conversation*" across the various priority areas. These "made in Alberta" resources include videos and learning guides, archived webinars, facilitator guides, and a collection of resource websites. (www.arpdcresources.ca)

Challenges, Celebrations and Trends in Professional Learning

In recent years, the Alberta Regional Professional Development Consortia (ARPDC) has experienced a myriad of changes and complexities as they respond to the goals, initiatives and areas of focus of the Alberta Education Business Plan and the identified professional learning needs of educators and jurisdictions throughout Alberta. The provincial education vision, and recent trends in education, provides a road map for Consortia to be responsive and work in a collaborative, coordinated manner, continuing to design and deliver cost-efficient professional learning opportunities to Alberta educators.

We strive to support/prepare educators in Alberta by providing adult learning opportunities and capacity building resources designed to impact professional practice and enhance student learning. Consortia accept and celebrate these changes and challenges and have responded by:

- Researching trends and current developments in the field of education, selecting best practices, and sharing this information with our stakeholders.
- Finding a balance between process, content and relevance when providing access to a variety of professional learning opportunities.
- Collecting and analyzing data, and utilizing the evidence to collaboratively plan programs responsive to the needs in each region.
- Maximizing the use of technology to coordinate provincial learning opportunities.
- Forming partnerships with a variety of PD providers, or brokering presentations on behalf of regional stakeholder groups.
- Hiring, training, and supervising staff involved in regional and provincial projects
- Leading, modelling and exploring new learning strategies, such as Communities of Practice. (Online and face-to-face)
- Providing cost effective, long term planning, and maintaining staff without sustained funding commitment.
- Responding to the requests from Alberta Education, districts, community partners and having the scope of staff that can bring integrity and quality to the work.

The ARPDC shares the vision of Alberta Education and our regional stakeholders to improve the learning of all teachers and other education stakeholders so they can best support student learning.

Albertan Government

Regional Consortium Statement of Revenues and Expenses For the Year Ended August 31, 2016 (in dollars)

Budget 2015/2016 Actual 2015/2016 Actual 2015/2016 REVENUES Management & Infastructure (Note 1)* 194.987 194.987 Net Conditional Grant Revenues: Provincial Programs (Schedule 1) 239.9203 322.355 Provincial Programs (Schedule 1) 299.921 313.904 321.944 Fee For Service Contracts (Note 2) 1.450 321.944 321.944 Other Alberta Education 21.970 1.490.930 836.283 Other Revenue: Conditional Programs (Schedule 1) 56.644 391.649 Grants - Non government sources (Note 3) 56.644 391.649 301.049 Other fees (Schedule 4) 100.000 12.187 31.649 Other fees (Schedule 4) 100.000 12.187 322.932 Coat Recovery Programs (Kote 3) 2.700 7.700 7.700 Regional Partnerships: Early Learning Regional Partnerships: Parka Canada 8.130 323.623 322.932 TOTAL REVENUES 1.946.140 1.575.594 1.227.932 Management & Infrastructure (Note 6): 33.000 1.681 6.34	CONSORTIUM NAME: Northwest R	egional Learning	Consortium	
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Other Revenue: Conditional Program Registration Fees: Provincial Programs (Schedule 1) Regional Programs (Schedule 1) Grants - Non government sources (Note 3) Cost Recovery Programs: (Note 5) Registration Fees (Schedule 4) Other (Note 4): Regional Partnerships: Early Learning Regional Partnerships: Early Learning CASS TOTAL REVENUES 1.946.140 1.575.594 1.927.99 315.311 3229.799 315.311 323.623 Board expenses (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) Board expenses (Note 8) Less: Program Cost Allocations (Note 9) 137.812 122.007 Regional Programs: Provincial Programs (Schedule 1) Cost Recovery Programs: Provincial Programs (Schedule 1) Cost Recovery Programs (Schedule 1)	Total Alberta Education	1,833,360	1,490,930	836,283
Conditional Program Registration Fees: Provincial Programs (Schedule 1) Regional Programs (Schedule 1) Grants - Non government sources (Note 3) Cost Recovery Programs: (Note 5) Registration Fees (Schedule 4) Other fees (Schedule 4) Other (Note 4): Regional Partnerships: Early Learning Regional Partnerships: Parks Canada CASS TOTAL REVENUES Infrastructure (Note 6): Salatnes, Wages, Benefits, Contracts and other fixed overheads (Note 7) Board expenses (Note 8) Less: Program Cost Allocations (Note 9) Program Delivery Costs (Note 10): Conditional Programs (Schedule 1) Cost Recovery Programs (Schedule 1) Regional Programs (Schedule 1) Regional Programs (Schedule 1) Cost Recovery Programs (Schedule 1) Cost Recovery Programs (Schedule 1) Cost Recovery Programs (Schedule 4) Other: Fee for Service Contracts Accounting and Audit Fees (Specify) (Specify) (Specify) (Specify) (Specify) (Specif	Other Bayerus			
Controlled Programs (Schedule 1) 1 Regional Programs (Schedule 1) 56.641 Grants - Non government sources (Note 3) 1 Cost Recovery Programs: (Schedule 4) 100.000 Other fees (Schedule 4) 100.000 Other fees (Schedule 4) 15.836 Other (Note 4): 8,130 Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada 8,130 CASS 1,990 TOTAL REVENUES 1,946,140 Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 Board expenses (Note 8) 3,000 Net Management & Infrastructure (Note 6): 3,000 Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 30,000 Board expenses (Note 8) 3,000 Program Delivery Cost (Note 10): 1,315,032 Conditional programs (Schedule 1) 1,315,032 Program A duil Fees 1 (Specify) 299,921 (Specify) 299,921 Cost Recovery Programs (Schedule 1) 299,921 20,023 28,023 Conditional programs (Schedule 1) 2	Conditional Program Registration Face:			
Provincial Programs (Schedule 1) 56.641 391.649 Grants - Non government sources (Note 3) 56.641 391.649 Cost Recovery Programs (Note 5) Registration Fees (Schedule 4) 100.000 12.187 Other fees (Schedule 4) 100.000 12.187 100.000 Other fees (Schedule 4) 100.000 12.187 100.000 Other fees (Schedule 4) 100.000 12.187 100.000 Other (Note 4): Regional Partnerships: Early Learning 2.700 12.000 Regional Partnerships: Parks Canada 8.130 1.950 1.227.932 <i>TOTAL REVENUES</i> 1.946.140 1.575.594 1.227.932 <i>Barles</i> , Wages, Benefits, Contracts and other fixed overheads (Note 7) 329.799 315.311 323.523 Board expenses (Note 8) 33.000 137.812 122.005 132.170 Net Management & Infrastructure expenses (Note 9) 194.987 194.987 194.987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) 2.36.200 28.023 223.55 Regional Programs (Schedule 1) 2.99.921 370.646 713.590 13.690 136.200 28.023	Conditional Program Registration Fees:			100000000000000000000000000000000000000
Aregional Programs (schedule 1) 391,644 Grants - Non government sources (Note 3) 391,644 Cost Recovery Programs: (Note 5) Registration Fees (Schedule 4) Other (Rote 4): 100,000 Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada 8,130 CASS 1,950 TOTAL REVENUES 1,946,140 Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 Board expenses (Note 8) 3,000 Less: Program Cost Allocations (Note 9) 137,812 Program Delivery Costs (Note 10): Conditional programs: Provincial Programs (Schedule 1) 1,315,032 982,039 Regional Programs (Schedule 1) 299,921 370,545 Regional Programs (Schedule 1) 36,200 28,023 Cost Recovery Programs (Schedule 4) 36,200 28,023 Other: Fee for Service Contracts 4 4 Accounting and Audit Fees 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFIC/T) 100,000 0 - <td>Provincial Programs (Schedule 1)</td> <td></td> <td>F0.044</td> <td>204 049</td>	Provincial Programs (Schedule 1)		F0.044	204 049
Grans - Non government sources (Note 5) Cost Recovery Programs: (Note 5) Registration Fees (Schedule 4) Other (Note 4): Regional Partnerships: Early Learning Regional Partnerships: Parks Canada GASS 1.946,140 Cost Recovery Programs: (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) Board expenses (Note 8) Less: Program Cost Allocations (Note 9) Net Management & Infrastructure expenses (Note 9) Program Delivery Costs (Note 10): Cost Recovery Programs: (Schedule 1) Provincial Programs (Schedule 1) Provincial Programs (Schedule 1) Cost Recovery Programs (Schedule 1) Cost Recovery Programs (Schedule 4) Other: Fee for Service Contracts Accounting and Audit Fees (Specify) (Specify) (Specify) (Specify) (Specify) (Specify) Specify (Specify) (Specify) (Specify) (Specify) (Specify) <	Regional Programs (Schedule 1)		50,041	391,049
Cost Recovery Programs: (Note 5) Registration Fees (Schedule 4) 100,000 12,187 Other (Note 4): Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada Regional Partnerships: Parks Canada 8,130 1 12,187 CASS 1,950 1 12,187 TOTAL REVENUES 1,946,140 1,575,594 1,227,932 EXPENSES Management & Infrastructure (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 137,812 122,005 132,170 Program Delivery Costs (Note 10): Conditional programs: Provincial Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 322,355 136,200 28,023 322,355 Regional Programs (Schedule 4) 36,200 28,023 713,590 36,203	Grants - Non government sources (Note 3)			
New Fees (Schedule 4) 100,000 12,187 Other (Note 4): Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada 8,130 CASS 1,950 TOTAL REVENUES 1,946,140 1,575,594 Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs; 298,023 322,355 Cost Recovery Programs (Schedule 1) 1,315,032 982,039 322,356 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 322,352 Other: Fee for Service Contracts	Cost Recovery Programs: (Note 5)	100.000	10 107	
Other fees (Schedule 4) 15.836 Other (Note 4): Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada 8,130	Registration Fees (Schedule 4)	100,000	12,187	
Other (Note 4): Regional Partnerships: Early Learning 2,700 Regional Partnerships: Parks Canada 8,130 1 CASS 1,950 1 TOTAL REVENUES 1,946,140 1,575,594 1,227,932 EXPENSES Management & Infrastructure (Note 6): 329,799 315,311 323,523 Board expenses (Note 7) Board expenses (Note 8) 3.000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 4) 036,200 28,023 0 0 Other: Fee for Service Contracts 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Other fees (Schedule 4)		15,836	
Regional Partnerships: Parks Canada 2,700 Regional Partnerships: Parks Canada 8,130 CASS 1,950 TOTAL REVENUES 1,946,140 EXPENSES 1,946,140 Management & Infrastructure (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) Board expenses (Note 8) 329,799 Less: Program Cost Allocations (Note 9) 137,812 Net Management & Infrastructure expenses (Note 9) 137,812 Program Cost Allocations (Note 9) 137,812 Net Management & Infrastructure expenses (Note 9) 194,987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) Conditional programs (Schedule 1) 299,921 Questional Programs (Schedule 1) 299,921 Cost Recovery Programs (Schedule 4) 36,200 Other: Fee for Service Contracts Accounting and Audit Fees 1,846,140 (Specify) 1,227,932 ANNUAL SURPLUS (DEFIC/T) 100,000 0 Accumulated Surplus at beginning of year 17,461 17,461	Other (Note 4):	a		
Regional Partnerships, Parks Canada 6,130 CASS 1,950 TOTAL REVENUES 1,946,140 EXPENSES 1,946,140 Management & Infrastructure (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) Board expenses (Note 8) 3,000 Less: Program Cost Allocations (Note 9) 137,812 Net Management & Infrastructure expenses (Note 9) 194,987 Program Delivery Costs (Note 10): 1,315,032 Conditional programs 982,039 Provincial Programs (Schedule 1) 1,315,032 Regional Programs (Schedule 1) 299,921 Cost Recovery Programs (Schedule 4) 36,200 Other: Fee for Service Contracts Accounting and Audit Fees 1,846,140 (Specify) 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 Accumulated Surplus at beginning of year 17,461 17,461	Regional Partnerships, Early Learning	2,700		
LASS 1,950 TOTAL REVENUES 1,946,140 1,575,594 1,227,932 EXPENSES Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 223 223 Other: Fee for Service Contracts	Regional Partnersnips: Parks Canada	8,130		
TOTAL REVENUES 1,946,140 1,575,594 1,227,932 EXPENSES Management & Infrastructure (Note 6): 329,799 315,311 323,523 Board expenses (Note 7) 3000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 137,812 122,005 132,170 Program Delivery Costs (Note 10): Conditional programs: 194,987 194,987 191,987 Proyincial Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 1) 299,921 370,645 713,590 Cother: Fee for Service Contracts 28,023 28,023 322,355 (Specify) (Specify) 1 1,575,594 1,227,932 TOTAL EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461	CASS	1,950		
EXPENSES Management & Infrastructure (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3.000 1,881 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs: 122,005 713,590 Conditional programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,645 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 713,590 Other: Fee for Service Contracts 4 4 4 4 (Specify) (Specify) 1 1,575,594 1,227,932 ANNUAL SURPLUS (DEFIC/T) 100,000 0 - - Accumulated Surplus at beginning of year 17,461 17,461 17,461 17,461	TOTAL REVENUES	1,946,140	1,575,594	1,227,932
Management & Infrastructure (Note 6): Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 194,987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 0 0 Other: Fee for Service Contracts	EXPENSES			
Salaries, Wages, Benefits, Contracts and other fixed overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 194,987 Program Delivery Costs (Note 10): Conditional programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 14,000 Other: Fee for Service Contracts 4,000 28,023 14,000 (Specify) (Specify) 1,000,000 0 - Cottal EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461	Management & Infrastructure (Note 6):			
overheads (Note 7) 329,799 315,311 323,523 Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs: 1315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 322,355 Other: Fee for Service Contracts 4 4 4 Accounting and Audit Fees 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFIC/T) 100,000 0 - - Accumulated Surplus at beginning of year 17,461 17,461 17,461 17,461	Salaries, Wages, Benefits, Contracts and other fixed			
Board expenses (Note 8) 3,000 1,681 634 Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs: 191,987 194,987 191,987 Conditional programs: Provincial Programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 0 0 Other: Fee for Service Contracts	overheads (Note 7)	329,799	315,311	323,523
Less: Program Cost Allocations (Note 9) 137,812 122,005 132,170 Net Management & Infrastructure expenses (Note 9) 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs: 194,987 194,987 191,987 Conditional programs: Provincial Programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 28,023 Other: Fee for Service Contracts 299,921 370,545 713,590 (Specify) (Specify) 28,023 28,023 28,023 (Specify) (Specify) 28,023 28,023 28,023 TOTAL EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 117,461 17,461 17,461	Board expenses (Note 8)	3,000	1,681	634
Net Management & Infrastructure expenses (Note 9) 194,987 194,987 194,987 191,987 Program Delivery Costs (Note 10): Conditional programs: 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 1,315,032 982,039 322,355 713,590 Cost Recovery Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 0 Other: Fee for Service Contracts 1	Less: Program Cost Allocations (Note 9)	137,812	122,005	132,170
Program Delivery Costs (Note 10): Conditional programs: Provincial Programs (Schedule 1)1,315,032982,039322,355Regional Programs (Schedule 1)299,921370,545713,590Cost Recovery Programs (Schedule 4)36,20028,0230Other:Fee for Service Contracts Accounting and Audit Fees (Specify) (Specify)111TOTAL EXPENSES1,846,1401,575,5941,227,932ANNUAL SURPLUS (DEFICIT)100,0000-Accumulated Surplus at beginning of year17,46117,46117,461Accumulated Surplus at end of year117,46117,46117,461	Net Management & Infrastructure expenses (Note 9)	194,987	194,987	191,987
Conditional programs: Provincial Programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 28,023 Other: Fee for Service Contracts 1,315,032 982,039 322,355 Accounting and Audit Fees 1,36,200 28,023 1 (Specify) 1,575,594 1,227,932 (Specify) 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 1117,461 17,461 17,461	Program Delivery Costs (Note 10):		-1000-000000-00000000-00000000	
Provincial Programs (Schedule 1) 1,315,032 982,039 322,355 Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 28,023 Other: Fee for Service Contracts 1,315,032 982,039 322,355 Accounting and Audit Fees 1,315,032 28,023 1 (Specify) (Specify) 1 1 1 (Specify) 1,575,594 1,227,932 1 TOTAL EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 1117,461 17,461 17,461	Conditional programs:			
Regional Programs (Schedule 1) 299,921 370,545 713,590 Cost Recovery Programs (Schedule 4) 36,200 28,023 1 Other: Fee for Service Contracts 1 1 1 Accounting and Audit Fees 1 1 1 1 1 (Specify) (Specify) 1	Provincial Programs (Schedule 1)	1,315,032	982,039	322,355
Cost Recovery Programs (Schedule 4) 36,200 28,023 Other: Fee for Service Contracts 1 Accounting and Audit Fees 1 1 (Specify) 1 1 (ANNUAL SURPLUS (DEFICIT) 100,000 0 Accumulated Surplus at beginning of year 1 1 1	Regional Programs (Schedule 1)	299,921	370,545	713,590
Other: Fee for Service Contracts Accounting and Audit Fees	Cost Recovery Programs (Schedule 4)	36,200	28,023	
Fee for Service Contracts	Other:			
Accounting and Audit Fees	Fee for Service Contracts			
(Specify) (Specify) (Specify) (Specify) (Specify) (Specify) TOTAL EXPENSES 1,846,140 ANNUAL SURPLUS (DEFICIT) 100,000 Accumulated Surplus at beginning of year 17,461 Accumulated Surplus at end of year 117,461	Accounting and Audit Fees			
(Specify)	(Specify)			
(Specify) 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 117,461 17,461 17,461	(Specify)			
TOTAL EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 117,461 17,461 17,461	(Specify)			
IOTAL EXPENSES 1,846,140 1,575,594 1,227,932 ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 117,461 17,461 17,461				
ANNUAL SURPLUS (DEFICIT) 100,000 0 - Accumulated Surplus at beginning of year 17,461 17,461 17,461 Accumulated Surplus at end of year 117,461 17,461 17,461	IUIAL EXPENSES	1,846,140	1,575,594	1,227,932
Accumulated Surplus at beginning of year17,46117,461Accumulated Surplus at end of year117,46117,461	ANNUAL SURPLUS (DEFICIT)	100,000	0	
Accumulated Surplus at end of year <u>117,461</u> <u>17,461</u> <u>17,461</u>	Accumulated Surplus at beginning of year	17,461	17,461	17,461
	Accumulated Surplus at end of year	117,461	17,461	17,461

* See notes to Forms 1 and 2 on page 7 and 8.

PLEASE **RETURN** hard copies of completed statements and schedules and the certification to: Allan Pon c/o School Finance Branch, 8th floor, Commerce Place, 10155-102 Street, Edmonton T5J 4L5 **BY DECEMBER 31, 2016**



Regional Consortium Statement of Financial Position As at August 31, 2016 (in dollars)

	August 31,	August 31,
	2016	2015
ASSETS		
Cash in Bank and Temporary Investments	368,447	1,270,286
Accounts Receivable (Note 11):		
Province of Alberta		
Alberta school jurisdictions	50,949	86,858
Other		
Prepaid Expenses (e.g. deposits for future programming)	11,497	5,000
Other assets		
TOTAL ASSETS	430,893	1,362,144
LIABILITIES		
Accounts payable (Note 12)	2,890	
Accrued liabilities (Note 12)		
Deferred Revenue:		
Conditional Grants:		
Provincial Programs (Schedule 3)	345,324	1,315,032
Regional Programs (Schedule 3)	26,478	17,712
Prepaid registration (Note 13)	38,740	11,939
Other:		
(Specify)		
(Specify)		
Total Deferred Revenue	410,542	1,344,683
TOTAL LIABILITIES	413,432	1,344,683
ACCUMULATED SURPLUS		
Unrestricted Funds (Note 14)	17.461	17,461
Operating Reserves (Note 15)	-	· · · ·
Capital Reserves (Note 16)	-	
TOTAL ACCUMULATED SURPLUS (Note 17)	17,461	17,461
TOTAL LIABILITIES AND ACCUMULATED SURPLUS	430.893	1 362 144

Schedule 1 (Note 5, Note 10) Conditional Grant Program Costs and Net Grants Revenue For the Year Ended August 31, 2016 (in dollars) Northwest Regional Learning Consortium

CONSORTIUM NAME:

			2013/2014		
•				DEDUCT:	
	Cost of Delivering Programs + (Note 7)	Cost of Delivering Programs (Note 7)	Total Cost of Delivering Programs	Program Registration Fees	Net Conditional Grant Revenue
	Allocated (Note 18)	Incremental (Note 19)			
Conditional Grant Programs:					
Provincial Programs					
Provincial FNMI PD Strategy #2014-0039		311,472	311,472		311,472
Elementary Mathematics Professional Learning 20	15-17 #2014-0141	670,567	670,567		670,567
(Specify)					
(Specify)			1		
(Specify)			e		
(Specify)			-		1
(Specify)					
(Specify)					-
(Snerify)					
(Sharify)					L
(Specify)					
territ.t					
(specify)					
(Specify)			-		1
(Specify)			-		
(Specify)			i.		
(Specify)			-		
(Specify)			1		
Total:		982,039	982,039		982,039
Regional Programs					
Curriculum Implementation #2015-0249		348,575	348,575	56,641	291,934
OLEP French Programming - CRC		21,970	21,970		21,970
(Specify)					1
(Specify)			•		*
(Specify)			e		ĸ
(Specify)					
(Specify)			1		5
(Specify)			4		
(Specify)			+		
Total	3	370.545	370.545	56.641	313.904

Notes to Schedule 1: a. Registration Fees are to be applied to the costs of delivering conditional programs and must be net of registration refunds.

NSORTIUM NAME:	Northwest Regional	Learning Consortium
		Amount Transfe 2015/2016 Note (b)
(Specify Program		
(Specify Consc	tium)	
(Specify Conso	tium)	
Program Total	(Specify Program)	
(Specify Program		
(Specify Conso	tium)	
Program Total	(Specify Program)	
(Specify Program		
(Specify Conso	tium)	
Program Total	(Specify Program)	
(Specify Program		
(Specify Conso	tium)	
(Specify Consc	tium)	
(Specify Conso	tium)	
(Specify Conso	tium)	
Program Total	(Specify Program)	
(Specify Program		
(Specify Consc	tium)	
(Specify Consc	tium)	
Program Total	(Specify Program)	

Notes to Schedule 2:

a. Excluding payments for cost recoveries. Include cost recoveries in *Program Delivery Costs* on page 1.

b. Program Totals are reported in Schedule 3 and are deducted in arriving at Deferred

Albertan

Schedule 3 Conditional Grant Program Deferred Revenue For the Year Ended August 31, 2016 (in dollars)

Northwest Regional Learning Consortium CONSORTIUM NAME:

			2010	5/2016		
				DEDUCT:	DEDUCT:	
		ADD:	ADD:	Grant	Conditional	Revenue:
	Deferred Revenue from	 Conditional funds invoiced 	 Current Year Receipts and 	 Transfers to Other 	- Grant Revenue - Note (c)	Conditional Grants
	Previous Year Note (a)	to other Consortia	Transfers-In Note (b)	Consortia (Schedule 2)	(Schedule 1 and Page 1)	Note (d) (Page 2)
Conditional Grant Programs: Note (e)						
Provincial Programs						
Provincial FNMI PD Strategy #2014-0039	410,377		4,200		311,472	103,105
Elementary Mathematics Professional Lear	п 904.655		8,131		670,567	242,219
(Specify)					1	•
(Specify)					•	
(Specify)					ł	-
(Specify)						ł
(Specify)					1	•
(Specify)					1	•
(Specify)					1	•
(Specify)					1	1
(Specify)						-
(Specify)					1	ſ
(Specify)					1	•
(Specify)					,	
(Specify)					,	ı
(Specify)					1	1
(Specify)					ł	•
Total:	1,315,032	-	12,331	,	982,039	345,324
Regional Programs						
Curriculum Implementation #2015-0249	17,712		300,700		291,934	26,478
OLEP French Programming - CRC			21,970		21,970	
(Specify)						•
(Specify)					r	
(Specify)					1	F
(Specify)					•	
(Specify)	-				,	
(Specify)					,	
(Specify)						
Total	17 71 2	,	322 670	,	313 904	26.478

Notes to Schedule 3:

a. Total will agree to Page 2 Deferred Revenue: Conditional Grants for the previous year and the previous year's Deferred Revenue Schedule.

b. Where necessary, the Alberta Education conditional grant manager should be contacted for approved to transfer deferred revenue from the original approved

c. Net Conditional Grant Revenue will correspond to Schedule 1 and Page 1.
 d. Deferred revenue represents unexpended funds that will be expended on programs or transferred to other consortia next year.
 e. Conditional Grant Program names should match Schedule 1.

Albertan Government

Cost Recovery Programs - Revenues and Costs: Note 3 For the Year Ended August 31, 2016 (in dollars) Schedule 4

CONSORTIUM NAME:	Northwest Re	gional Learning Consortiun	-	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	Registration Fees	Other Fees	Costs (Note 18 Note 19)	Annual Surplus
	2015/2016 +	2015/2016	2015/2016 =	2015/2016
Program: Curriculum Coordinatros Meeting #2015-0189		2,120	2,120	0
Regional Partnerships: Parks Canada		5,216	5,216	
Regional Partnerships: Early Learning	12,187	8,500	20,687	
				1
				1
				1
				3
Program Total	12,187	15,836	28,023	0

Program Total

Notes to Schedule 4:

a. Includes payments for grants held by other Consortia. Cost Recovery Expenses are included in the Cost of Delivering Conditional Programs in schedule 1.



Certification of Regional Consortium Financial Statements For the Year Ended August 31, 2016 (in dollars)

CONSORTIUM NAME: Northwest Regional Learning Consortium

I certify that to the best of my knowledge, the information provided in the attached statements, notes and schedules is correct.



NOTES TO FORMS 1, 2 AND SCHEDULES

- Note 1 Management and Infrastructure grant from Alberta Education (total amount received for the year).
- Note 2 Alberta Education pays consortia for services provided under certain contracts/agreements.

Note 3 E.g. grants and subsidies from private partnerships (e.g. Shaw).

- **Note 4** Funding from other provincial government departments or the Federal government; bank interest, conference and cost recovery program registration and other cost recovery revenue, and operational fees recovered from other consortia.
- **Note 5** Cost Recovery Programs are Programs that are not supported through Conditional Grants. Such programs are funded through provincial or regional registration fees and other fees.
- Note 6 Costs of operating and maintaining the consortium office.
- Note 7 Including Office Staff (Executive Director, Executive Assistant and other office staff). Fixed overheads include office space, utilities, and office supplies. These are indirect costs that benefit all programs. Where Office Staff work on a particular program or, for example where leased space is used to deliver programs, these costs should be allocated to programs. Purchases for equipment used primarily for office overhead (e.g. photocopiers), some of which should be allocated to programs (See Note 18), should also be charged to management and infrastructure expense.
- Note 8 Including meeting fees, supplies, travel and subsistence and board development.

di.

- Note 9 ENTER AS POSITIVE: Program cost allocations are M&I (Head Office) expenses that have been charged to conditional grant or cost recovery programs because the program benefited directly from M&I employee time or other overheads. (Where M&I expenses benefit all or many programs equally (indirect benefit) these costs should not be allocated to programs). The entry to charge M&I expenses to programs is Dr. Program costs (by program); Cr. Program cost allocations. This method will leave all M&I expenses, whether allocated or not, on the Note 7 expense line. It is hoped that "Net Management & Infrastructure" expenses (i.e net of program cost allocations) will be less than or approximately equal to the M & I grant from Education.
- **Note 10** Program delivery costs include part-time staff and contracted coordinators or consultants (e.g. program host, presenters, registration staff), and other direct costs including materials, site, audio-visual, catering, leased space, equipment used primarily for conditional programs, etc. Equipment costs attributed to more the one program (e.g. video conferencing) should be allocated to programs proportionate to other program costs. These are direct costs that can be attributed to programs. These costs do not include amounts transferred to other consortia, but do include costs invoiced to other consortia.
- Note 11 Amounts owed to the consortium at the end of the year.
- **Note 12** Unpaid balances pertaining to the year. E.g. Unpaid wages, vacation pay.
- **Note 13** Pertaining to programming planned for subsequent year(s).
- **Note 14** Unrestricted Funds represent the net assets (total assets minus total liabilities) less any operating or capital reserves for earmarked programming.
- Note 15 Funds earmarked for future operations or programming.
- **Note 16** Capital Reserves represents the net assets restricted for future capital expenditures.
- Note 17 Total Accumulated Surplus is the total of operating and capital reserves and unrestricted funds.
- **Note 18** Allocated costs are M&I costs that directly benefit a specific conditional grant or cost recovery program controlled by the consortium and that have been credited to Program Cost Allocations (see Note 9). Allocated costs are funded by registration fees, conditional grants, or other cost recovery fees.
- **Note 19** Incremental costs are out-of-pocket expenses attributable to specific programs controlled by the consortium, also funded by registration fees, conditional grants or other cost recovery fees. They include costs incurred by participating consortia and reimbursed to them. These other consortia net thier reinbursement agaisnt their initial expense, thereby zeroing out the expense. This eliminates the duplication of expenses. Where other consortia bill an administration fee in addition to their out-of-pocket costs, miscellaneous revenue should be credited with that portion of the reinbursement.

Appendix C



FINAL REPORT

FIRST NATIONS, MÉTIS, AND INUIT **PROFESSIONAL LEARNING PROJECT**

Alberta Regional Professional Development Consortia

www.fnmiprofessionallearning.ca

September 30, 2016







Regional Learning





 THE GUIDANCE OF ELDERS AND WISDOM KEEPERS
 IS A KEY PART OF THIS JOURNEY

Alberta Regional Professional Development Consortia Lead Contact: Karen Egge, Executive Director Northwest Regional Learning Consortium 9625 Prairie Road Grande Prairie, AB, T8V 6G5 1-800-864-4140 Fax: 780-882-7908

Lead Project Developer and Facilitator: Solange Lalonde

Citation of Provincial First Nations, Métis, and Inuit Professional Learning Project Final Project Report: Lalonde, S., Alberta Regional Professional Development Consortia (2016). *Provincial First Nations, Métis, and Inuit Professional Learning Project Guiding Document.* Calgary, AB: Alberta Regional Professional Development Consortia.



The Essential Conditions: A Guide to Support Implementation helped to inform our work in hopes of creating a coherent and intentional effort to support educators.

We celebrate the completion of this phase of the work and I ask on behalf of everyone involved in the project that we continue to build on the knowledge and processes gained through this pilot action research and continue to build the systemic change required.

Sincerely, Karen Egge, Executive Director September 30, 2016





EXECUTIVE SUMMARY

The First Nations, Métis, and Inuit Professional Learning Project focuses on building capacity, engaging learners, and creating paths for success.

As educational institutions and organizations gain momentum in responding to the *Calls to Action from the Truth and Reconciliation Commission* (2015), this report can serve as resource for educators to modify and adapt to reflect regional perspectives in a provincial context of First Nations, Métis, and Inuit education.

The original intent of the First Nations, Métis, and Inuit Professional Learning Project was to find a systemic means of designing and implementing professional learning opportunities that build educator capacity, engage learners, and create paths for success in creating relational space for Indigenous perspectives and content to all aspects of educational programming.

This final report represents the collective experience and contributions of many educators and community members who have shared their knowledge, wisdom, and understandings so that we can continue to build paths toward reconciliation through education. This report is organized into four sections. Additionally, a number of First Nations, Métis, and Inuit Professional Learning Project resources can be found on an engaging website at **www.fnmiprofessionallearning.ca**. This website is designed to provide users with a myriad of educational supports for designing and facilitating professional learning opportunities, as well as for selecting and implementing curricular materials.

Section One provides a quick overview and summary of the project goals. Major findings from the project include observations that professional learning is most effective when it is designed to:

- Provide an opportunity to increase selfawareness, allow for personal growth, and follow a strength-based approach of engagement
- Provide an opportunity for educators to engage in experiential activities with peers and Indigenous community members and when



This final report for the First Nations, Metis, and Inuit Professional

Learning Project represents the collective experience and contributions of many educators and community members who have shared their knowledge, wisdom, and understandings so that we can continue to build paths toward reconciliation through education.



there is the relational space for critical reflection on pedagogy

- Empower educators to reflect an in-depth understanding of foundational knowledge of First Nations, Métis, and Inuit in their educational programming
- Allow for opportunities for educators to connect with spaces and places where they can build healthy relationships with regional Indigenous community members

Section Two includes an in-depth look at the major findings, recommended actions, as well as considerations for the future for various stakeholder groups. As the momentum increases for the call for professional learning in Indigenous education, this section can serve to contribute to conversations related to the Teaching Quality Standard and the School Leader Standard.

For the three years that the project was underway, the pilot school authorities met for an annual Spring Gathering. The first year, there were 23 educators from four pilot school authorities and in the second year, there were 53 educators from six school authorities. For the final Spring Gathering, there were over 150 educators from across the province representing diverse educational communities and sectors. **Section Three** captures the experiences of the eight pilot school authorities, specifically, their key findings as well as their turning points, critical moments and catalyst events. This section includes a link to the video of each of the school authority's final presentation at Spring Gathering.

Resources developed for the First Nations, Metis, and Inuit Professional Learning Project can be found on an engaging website at <u>www.</u> fnmiprofessionallearning.ca.

Section Four engages the reader through the six-step process of designing professional learning using the tools and resources developed throughout the Provincial First Nations, Métis, and Inuit Professional Learning Project. The tools are embedded in the report and additional guides are included in the appendix. The process and tools in this section have been designed for scale and can be used by an individual educator, a cohort, a professional learning community, a school, or an entire school authority.



Acknowledgements

The First Nations, Métis, and Inuit Professional Learning Project was informed by the collaborative efforts of a steering committee comprised of representatives from the Alberta Regional Professional Development Consortia (ARPDC), Alberta Education, First Nation and Métis organizations and Northland School Division.

The Northwest Regional Learning Consortium (NRLC) Executive Director Karen Egge provided exceptional leadership and contract services for the completion of this Project. The research and design for the Provincial First Nations, Métis, and Inuit Professional Learning Project was created as part of Solange Lalonde's graduate research. Thank you to Solange Lalonde for permission to use the nature image. An additional thank you to Solange Lalonde and Tammenithia Diesel for their permission to use the images in this report and on the website. Thank you also to Patricia Shields-Ramsay and her team at InPraxis Learning for their work on the concept, design, and development of the website. A special thank you to pilot school authorities for their efforts in developing and articulating a common understanding of the goals and to create a collection of resources to support further professional learning.

Pilot School Authorities

High Prairie School Division No. 48 Edmonton Catholic Schools Edmonton Public School Board Wolf Creek School Division No. 72 Chinook's Edge School Division No. 73 Rocky View School Division No. 41 Calgary Catholic School District Holy Spirit Roman Catholic Separate Regional Division No. 4

























PROFESSIONAL LEARNING PROJECT

The First Nations, Métis, and Inuit Professional Learning Project focuses on building capacity, engaging learners, and creating paths for success.

Project Background

The First Nations, Métis, and Inuit Professional Learning Project calls for educators across the province to take actions to develop their understanding of creating relational spaces for First Nations, Métis, and Inuit perspectives and content in educational programming.

The First Nations, Métis, and Inuit Professional Learning Project is guided by action research where the focus is on designing professional learning opportunities in the following three areas.

The first is building capacity of educators within an educational community in order to create a pedagogical shift to include First Nations, Métis, and Inuit content and perspectives into all aspects of educational programming. The second area of focus is on engaging learners, where professional learning opportunities are designed to include the large scope and diversity of educators within a community.

The third focus of the action research is on creating paths for success, where educators are demonstrating understanding and achievement in the project's four goals of Learning to Be, Learning to Know, Learning to Do, and Learning to Relate. These four goals were inspired by the UNESCO Pillars of Education and are expressed in a way that honours Indigenous ways of knowing.

Currently, success in First Nations, Métis, and Inuit education is fundamentally measured by high school graduation rates for selfidentified Indigenous students. Focusing on the achievement gap reflects the notion that the problem lies with the self-identified First Nations, Métis, and Inuit students when the underlying issue is the educator capacity to create



a relational space to bring Indigenous perspectives and content to all aspects of educational programming. The deficit lies within the realm of educator and system capacity, not with an identified demographic of students.

The project research and design has been informed by Dr. Allan Luke's extensive research in Indigenous education. The most significant impact of his work has been the influence on ensuring the project follows a strength-based approach, as opposed to deficit-model thinking, in relation to Indigenous education.

The most significant impact has been the influence on ensuring the project follows a strengthbased approach in relation to Indigenous education.

Using an inquiry-based design has allowed for regional perspectives to be heard within a provincial context. Each of the project goals also has a guiding inquiry question to encourage participants to engage in critical thinking about the professional learning.

Through the design of the reporting in this professional learning project, participants are contributing to a qualitative narrative approach to identifying success and achievement in professional growth. This has been a fundamental feature of the project, with the intention to create alignment in the goals of professional learning and the means that educators have to report achievement and share wise practices with one another.

Finally, the architecture of the project follows an Understanding by Design model (Wiggins and McTighe, 2005). Using this model has provided guidance to ensure professional learning activities are not a "one-time" session, but rather, a part of a larger focus on building capacity in Indigenous education.



The Professional Learning Project Goals

The First Nations, Métis, and Inuit Professional Learning Project is focused on four goals. These goals empower educators to achieve success in:

Learning to Be, by developing wise practices in engaging First Nations, Métis, and Inuit community members in educational programming.

Learning to Know, by developing foundational knowledge and reflecting insightful understanding of historical events and current contextual realities.

Learning to Do, by delivering curricular programming that acknowledges and honours the rich diversity of Indigenous ways of knowing and doing.

Learning to Relate, by designing educational spaces that acknowledge and honour First Nations, Inuit, and Métis people, culture, language, and community.

Educators will enhance healthy relationships among all community members in order to relate and represent their cultural understanding of First Nations, Métis, and Inuit perspectives and content within community context.

earning to Relate

Educators incorporate Educators build their Relate and model the attributes capacity to acquire, of an engaged thinker and connect, and understand ethical citizen with an the attributes, skills, entrepreneurial spirit in and knowledge that Be Do creating a relational contributes to effectively (JWA space to include First teaching First Nations, Nations, Métis, and Inuit Métis, and Inuit content perspectives and content Кпоw and perspectives to all in educational students. programming.

> Educators plan and deliver appropriate and engaging curriculum based on their understanding of historical events and current contextual realities which have impacted First Nations, Inuit, and Métis people and its effect on student learning.

Learning to Know



Arning to

The Professional Learning Project Website

The First Nations, Métis, and Inuit Professional Learning website was developed as a means to share resources, tools, templates, and professional learning supports that were identified and developed through the collaborative work of the project. The website was designed to shift the focus to implementation of the project's four goals and provide a comprehensive collection of resources that reflect regional perspectives in a provincial context of First Nations, Métis, and Inuit education. It is designed to support districts, schools, cohorts, communities of practice, individual teachers, instructional leaders, and professional development consultants.



Learning to Be provides resources, tools, and templates to reflect on the things you do that define who you are as an educator in your educational community.

The First Nations, Métis, and Inuit Professional Learning website is organized into five pages. The home landing page establishes the context and purpose of the website and guides educators in its use. Foundational resources, weblinks, and other sources of information are provided to introduce educators to processes used for First Nations, Métis, and Inuit professional learning.

The four pillar pages – Learning to Be, Learning to Know, Learning to Do, and Learning to Relate – encourage educators to self-assess their knowledge and skills and provide galleries of resources that are aligned with the goal of building capacity in Indigenous education as well as learning outcomes in Alberta programs of studies.



Learning to Know provides resources, tools, and templates to develop foundational knowledge and reflect insightful understanding of historical events and current contextual realities.




Learning to Do provides resources, tools, and templates to empower educators with resources and tools and engage in professional learning to support curricular programming.

The **Process Resources** page provides tools and templates that guide educators through a professional learning process that meets the goals of the four pillars and culminates in the design and implementation of a professional learning plan.

Some of these tools and supports are provided in **Section 4: Process for Designing Professional Learning** of this final report. They map out a six-step process for designing a professional learning plan, based on an Understanding by Design model. The goals, understandings, essential questions, desired results, and evidence in the professional learning plan are integrated throughout the First Nations, Métis, and Inuit Professional Learning website.



Learning to Relate provides resources, tools, and templates to foster a sense of belonging by creating spaces and places that acknowledge and honour First Nations, Inuit, and Métis people.

Professional Learning Website: www.fnmiprofessionallearning.ca





Elementary Mathematics Professional Learning

Apprentissage professionnel en mathématiques à l'élémentaire

A series of instructional and collaborative professional learning experiences, developed simultaneously in both English and French, were offered synchronously, through provincial webinars, regional opportunities, and technology-mediated platforms, and asynchronously through the EMPL Learning Portal. These experiences were designed to enhance:

- Teacher understanding of mathematical content and conceptual relationships
- · Formative and summative assessment practices
- Teacher-parent communication



This project aimed to provide:

- Opportunities to enhance and develop the personal content expertise of teachers
- Assistance for teachers in further developing their ability to assess student mastery of skills and concepts, enhancing teacher ability to recognize and quantify student growth
- Additions and refinements to teachers' personal instructional practices, enhancing their ability to choose appropriate activities and resources

After watching the Equality webinar, "Now I understand why my first year calculus students are making the same mistakes as my 5 year old son!" ~S. Graves

Teachers are provided with access to a variety of resources, materials, professional learning and coaching ideas arranged around 3 big topics:

- Curricular Content (subdivided into Equality, Additive Thinking and Multiplicative Thinking),
- Instructional Practices, and
- Assessment.





These resources support follow-up learning opportunities for teachers to continue the conversation and opportunities for deeper and more personal reflection. Teachers were invited to work collaboratively to develop instruction that:

- Addressed the desired content (skill and knowledge) outcomes
- Determined the degree of mastery and fluency that students should be able to show
- Chose appropriate resources and designs learning activities to help students

Educators have accessed the EMPL Learning Portal 24 601 times in the 2015-2016 school year, for a total of 32 971 visits since February, 2015.

During the 2016-2017 year, the EMPL Learning Portal, located at <u>http://learning.arpdc.ab.ca</u>, will continue to develop through the addition of resources, activities, research, and evidence of learner understanding.





Executive Director: Karen Egge <u>Karen.egge@gppsd.ab.ca</u>

> Math Support Contractor: glorway@thinking101.ca

NRLC Support for Mathematics Professional Development 2015-2016

The NRLC Plan for Support for Mathematics is rooted in, and guided by a continual scanning of research on mathematics, teaching, learning and change. What we know from the literature is that the implementation of any curriculum change is a <u>complex, long-term venture.</u> It requires the combined effort of the entire system, working together. It must be supported by <u>uninterrupted</u> funding that can be adapted and adjusted in response to the constantly evolving complexity that is our current reality (Lorway, 2015). NRLC represents one strand in a web of interrelated agents who can influence the outcome of that venture.

Good teachers, effective teachers, matter much more than particular curriculum materials, pedagogical approaches, or "proven programs" (Allington & Johnston, 2001; Darling-Hammond, 1999; Duffy, 1997; Pressley, et al, 2001; Sanders, 1998; Taylor, Pearson, Clark & Walpole, 2000). It has become clear that investing in effective teaching – whether in hiring decisions or professional development planning – is **the most "research-based"** strategy available.

The conceptualizations embedded in the 2007 Program of Studies for Mathematics, 2007 challenge educators to transform their beliefs and understandings of what it means to "do" mathematics. Those same educators bring to any learning event prior experiences that have shaped their beliefs about what it means to learn math. Most experienced school mathematics as an exercise in copying, memorizing and remembering, experiences that work against them as they struggle to transform their practice. **Educators are the product of the very system they are now trying to reform.**

"Enacting this curriculum requires teachers to learn to engage students in complex reasoning through authentic tasks and contexts, to find ways to connect students to the content through **mathematical reasoning**, despite having never experienced it themselves" (Ball, 2014). The time that must be invested in allowing teachers opportunities to learn, practice, make mistakes, re try, relearn is continually underestimated when decisions about funding are made.

Early adaptors to change demand a different level of support and learning opportunities than their slower to adopt colleagues, while teachers new to the profession, new to the grade level, new to the assignment of mathematics, all bring different levels of readiness and understanding to the change process and request different levels of support for implementing the curriculum. It is increasingly difficult to provide adequate, multi tiered offerings in the face of the complexification of needs in the field.

As a Consortia, we continue to respond in as timely a manner as possible to requests for support from teachers, schools and Districts. Those requests often fail to acknowledge the complexity of the levels of support needed to match the differences in readiness for engagement, learning and personal growth that teachers approach to challenges to their knowledge of content, and pedagogical expertise of the teachers who need to participate. As a result there can be a mismatch between the type of support set up and the expectations of the teachers who register.

This document will report on highlights of the professional learning opportunities sponsored by NRLC during the 2015-2016 school year. Those highlights are loosely fitted to the following categories:

Support for Regional Capacity Building Support for Mathematics Teachers K to 6 Support for Mathematics Teachers 7 to 12 Connecting and Communicating : Building Stakeholder Capacity

1

Building Regional Capacity

The NRLC sponsored Numeracy/Literacy/Competencies Instructional Leadership Cohort met four times during the year. students at all levels of capable and competent. For our study we often gather artifacts and review lessons and activities the participating teachers have built with their students. Mathematics and the competencies form a central core to this learning but CONNECTING ACROSS GRADES AND CURRICULUMS is a huge part of the work. Members of the cohort can and will attest to the truth in the following 2 statements:

Change takes more than 5 years, sustaining change may be virtually impossible until and unless the entire school is on board. Change is a personal and highly emotional construct. All the initiatives in the world will not move teachers forward unless teachers transform their beliefs, their abilities and their understandings.



Every time we meet I am pushed to re -sort and re -think outcomes. The connections that emerge are incredible... Imagine the impact across a school if every year we challenged ourseves to do this as a staff. April Brown, PWSD

		Classification of the second s
which earn is the tradition way and way do use say it is a traditional way?	de se tracé and trace have average and mode strace	SCIENCE

One strong indicator of the influence and success of this work: Every year members of the group are chosen by their schools and districts to assume leadership roles.

Materials and artifacts the Cohort have been developing can be found at http:// NRLCthink101math.wordpress.com

Challenges to the progress of this group and its members include:

- The realities of the daily challenge that is teaching... Participants in the group struggle with balancing conflicting demands on their time. Although the dates are set out well in advance, participation is interrupted by the myriad of competing initiatives that arise over the course of the year.
- Members of the team are eager and willing to share their learning with colleagues, NRLC has no control over whether or not participants are given time, place or authority to share their experience and expertise with colleagues.

Identifying, organizing and teaching from a more connected view of mathematics that includes literacy and the competencies.

One of the topics the group continues to study : What are the big ideas of number as they emerge across the grades. How can we influence the mathematical content knowledge of our peers and help them to understand and plan from a more connected vision of those big ideas.

If change is to occur it needs to be based on a view of the 'big ideas' of number being developmentally linked. This clashes with the traditional linear way of presenting curriculum content. The latter encourages teachers to teach only the content 'designated' to their particular year level without necessarily ensuring that children have the pre-cursor knowledge required to be able to understand it. The situation where children may lack specific knowledge or may develop misconceptions is exacerbated the further they move through school. What needs to



happen is for teachers to be encouraged to use 'big ideas' as a series of coherent concepts connected in developmental ways. That is, the foundations for some later concepts are being laid years before full understanding of the concept may manifest itself. (Hurst & Hurrell, 2014)

"I have learned through the cohort how I can help my students learn to take ownership of their learning. I travel almost 7 hours to participate because learning how to teach mathematics in a way that reaches all students requires opportunities to study with "experts like Geri" who challenge us to think outside our own school experiences in order to meet the needs of all students. It is time to acknowledge just how long it takes for teachers to learn how to teach for understanding". Kristin Wright, FVSD

Support for Classroom Teachers:

A Three Day Workshop Series for Grade 2/3, designed around the topics of equality and additive reasoning designed to include real time demonstrations in classrooms. Facilitated by Geri Lorway.

A Three Day Workshop Series for Grades 4 to 6, designed around the topics of equality and multiplicative reasoning, designed to include real time demonstrations in classrooms. Both filled quickly with many requests to repeat this model again. Facilitated by Geri Lorway.





A Three Day Workshop Series for Grades 7 to 9 designed around the topic of area models and including real time classroom demonstrations. Facilitated by Dr. James Tanton.

A Three Day Workshop Series for Grades 10 to 12 designed around the topic of teaching for thinking and including real time classroom demonstrations. Facilitated by Dr. James Tanton

James expected us to reason and think things out, he encouraged us to follow logic when answering and used prompting and guided questions to direct us. This certainly links to the program of studies; "Mathematical reasoning helps students think logically and make sense of mathematics. Students need to develop confidence in their abilities to reason and justify their mathematical thinking." (POS, p8)

By letting us feel that what we had to say was worth listening to, clarifying and discussing, he modeled how teachers might help students learn to: "consider the context and seek additional information and perspectives when analyzing information. (Making them) able to reflect on their learning, recognizing strengths and weaknesses in their reasoning and in arguments presented by others."

Emerging from this work is a slowly evolving focus on the power of area models as a storyline that can connect teachers, content and students across the grades from Kindergarten to Grade 12. An online site is slowly developing. The site will house teacher artifacts, stories, exemplars and lesson plans. At present it is not open to a public audience but selected sections of the vision can be accessed at: https://thinking101canada.wordpress.com/spatial-reasoning/

Search the page for the powerpoint: How To Think And at http://gdaymath.com/courses/astounding-power-of-area/



Contributing to Provincial Capacity: Spatializing Curriculum: The Next Evolution



Sparked by the continuing collaboration between Geri Lorway and James Tanton, a special project emerged this year. In an effort to reach out to spread the capacity further across the province, Geri (Thinking101) and James, Mathematician in Residence with MAA along with Sean Graves, U of Alberta designed and facilitated two Think Tanks focused on

the implications for the classroom and the mathematics and science curriculums arising from the growing body of <u>current research</u> that is studying the role that temporat-visual- spatial reasoning plays in the teaching and learning of mathematics and it's well researched impact on student achievement. This research has implications for transforming teacher instructional practices but more important implications for curriculum change/renewal/ evolution. I want to thank you again for making arrangements for me to attend the Spatial Reasoning workshop this weekend. I found it truly inspiring, not the least of which was watching all the light bulbs go off for this dedicated group of elementary teachers from across the province. Thank you for your dedication to mathematics education and for gathering us all together for this important and timely event. Dr. Sengupta

Among the participants: Dr. Brent Davis, University of Calgary, Dr. Pratim Sengupta, Research Chair, U of Calgary, Dr.Susan Chrichton, UBC and Dr. Gina Cherkowski, Mount Royal University, members of the NRLC Cohort, a variety of K to 12 educators from across the province.

Learners of all ages who perform better on spatial tasks also perform better on tests of mathematical ability See M. B. Casey, Nuttall, & Pezaris, 2001; Delgado & Prieto, 2004; Geary, Hoard, Byrd-Craven, Nugent, & Numtee, 2007; Holmes, Adams, & Hamilton, 2008; Kytta, Aunio, Lehto, Van Luit, & Hautamaki, 2003; McKenzie, Bull, & Gray, 2003; Rasmussen & Bisanz, 2005

Brain imaging studies confirm that similar areas are activated when people process both spatial and number tasks. *(see Hubbard, Piazza, Pinel, & Dehaene, 2005, and Umilta`, Priftis, & Zorzi, 2009*

"The relation between spatial ability and mathematics is so well established that it no longer makes sense to ask whether they are related." *Mix & Cheng* (2012

The transition from additive to multiplicative thinking is one of the major barriers to learning mathematics in the middle years... Siemon, Breed, Virgona, 2010

See Appendix 2 for more. The report and recommendations that came out of this work. (Available on line at: http://NRLCThink101Math.wordpress.com) Menu item Spatial Reasoning

Participation in this workshop helped me to identify strong connections between the mathematics curriculum and approaches such as Maker Space and Design Thinking. These connections are usually not explicit in the curriculum and, with the help of participating teachers, we found some emphasis on the very notion of number that should be addressed explicitly in the early years to develop a more complete notion of number.

Numbers are used for many purposes and with diverse meanings. The current curriculum stresses the meaning of number as quantity (e.g. number of objects in a set). However, other meanings for number related to magnitudes are scarcely addressed in the early years (K to 4). Examples of these meaning are length, height, volume, and time. While for experts (adults) these differences are barely noticed, it might be very confusing to switch from one meaning to other for learners. These meanings of number related to magnitudes are actually useful for making or creating real artifacts, representing a strong connection to Computational Thinking, Design Thinking, and Maker Spaces.

The discussion with teachers during the workshop served to identify explicitly learning outcomes where the notion of number as magnitude could be stressed. For instance, when learning to count, students can engage in actions such as walking to count the number of steps in a path. This action's is very different than pointing with the finger to count objects in a set -- number is length in the former case and quantity in the later.

Connecting to Provincial Stakeholders Groups:

Members of the NRLC Cohort collaborated to prepare a Talking Points document in order to provide Alberta MLA's a balanced and fact based response to the continuing "social media" debate suggesting the Alberta Program of Studies for Mathematics was not mathematically appropriate.

Talking Point One: The phrase "discovery learning" is not in the Alberta Program of Studies.

A word search of the curriculum document does not bring up "discovery learning".

We have no idea why "discovery learning" is being bantered about. We do not discuss it in our working teams and did not study it in University. The term "inquiry learning" is not in the curriculum document. The term "guided discovery" is not in the curriculum document. The term "guide on the side" is not in the curriculum document.

The curriculum does require teachers to include thinking, reasoning and problem solving in their instruction, expecting that students will learning to THINK, REASON AND SOLVE PROBLEMS as part of their mathematics education.

Talking Point Two: Mathematical reasoning must be taught alongside not before arithmetic if we expect students to become effective, efficient and confident. The Curriculum stresses BOTH.

As with the phonics debates of the last 4 decades, there is a misconception that until you have memorized a set of facts and rules and can repeat them with speed you cannot learn any other mathematics. This is not true.

There is clear evidence supported by research, and by the hundreds of years of experience with children that we, as teachers have accumulated, that demonstrates clearly students must learn how to **THINK and REASON** about number relationships and number operations as they are learning about number and number facts. It is not either or. There is nothing harmful about memorizing, it just is not the way to assure students can retain and apply "number facts" to solve problems. (See Nunes research attached)

Talking Point Three: The BASIC FACTS includes an understanding of and ability to apply NUMBERPROPERTIES. The Alberta Program of studies includes learning number properties across the grades.We assert that anyone who studies mathematics, at any level, would agree: NUMBER PROPERTIES &REASONING about RELATIONSHIPS are every bit as IMPORTANT as recalling NUMBER FACTS.

This is a challenge to teachers and parents. Many of us went through a system that did not value teaching students to make sense or understand how math worked or how numbers and operations were related. We were (for the most part) expected to follow procedures that we often forgot right after the test.

This curriculum is written such that every year students work on UNDERSTANDING RELATIONSHIPS that are critical to connecting arithmetic to algebra in the higher grades AS they also learn what the public like to call the "FACTS". A key point, all the facts are not learned at once, just like all the words in the English language are not learned at once.

Talking Point Four: The term "traditional" or "standard "algorithm is not the issue. Once you understand anything, you are much more likely to actually want to improve your ability to remember and apply.

We do not disagree with students UNDERSTANDING and applying whatever is being <u>agreed</u> upon as a TRADITIONAL algorithm. We want students to understand the procedures they are following so that they can learn to THINK and REASON and SOLVE PROBLEMS. We will never agree with just telling students how to perform a set of steps. When students only memorize one way to do things, without ever questioning how it works or why it works, they do not develop the ability to think on their own. They learn instead that math does not need to make sense. They are often, if not always, stuck when the problem suddenly becomes more complex or is not set up the way they have always seen it. They eventually begin to see mathematics as meaningless and confusing.

A snapshot of some of the more FUNDAMENTAL AND BASIC FACTS included within the specific outcomes for the Alberta Program of Studies for Mathematics.

Grade One			
Number Properties & Relationships	Number Facts		
Subitize Use <u>parts or equal groups</u> to count sets (Number recognition without counting by ones) • think addition for subtraction (inverse operations) **Describe equality and inequality **Record equalities	 **Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially and symbolically **Describe and use mental mathematics strategies for basic addition facts and related subtraction facts to 18 **Understand and apply strategies for addition and related subtraction facts to 18. **Recall facts to 5. 		
Grad	e Two		
Viaue 1 wo Number Properties & Polationships Number Feats			
Number Properties & Relationships • using the commutative property • using the associative property • Thinking addition for subtraction (inverse operations) **Demonstrate and explain the meaning of equality and inequality **Record equalities and inequalities Grade Mumber Properties & Relationships Apply number properties • using the commutative property • using the property of zero • thinking addition for subtraction(inverse operations) Multiplication and division: • relate multiplication to division(inverse operations)	Number Facts **Demonstrate an understanding of addition with answers to 100 and the corresponding subtraction **Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18. **Understand and apply strategies for addition and related subtraction facts to 18. **Recall addition and related subtraction facts to 10. Three Number Facts **Describe and apply mental mathematics strategies for adding two 2-digit numerals **Apply mental mathematics strategies and number properties, in order to understand and recall basic addition facts and related subtraction facts to 18. **Understand and recall multiplication & division to 5 x 5.		
Grade Four			
Number Properties & Relationships	Number Facts		
As we move more deeply into multiplication: **Apply the properties of 0 and 1 for multiplication and the property of 1 for division. [C, CN, R] • applying the distributive property. • relating division to multiplication (inverse operations)	 **Describe and apply mental mathematics strategies to determine basic multiplication facts to 9 × 9 and related division facts. **Recall to 7 x 7. **Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems **Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems 		

Connecting to Provincial Stakeholders Groups

The Alberta Mathematics Dialogue is a yearly event that attracts between 70 and 100 post secondary mathematics instructors, professors and researchers. Continuing with our commitment to build provincial capacity, Geri Lorway represented the position of NRLC Cohort and the provincial EMPLO project. In her presentation, she shared the Talking Points items as she shared insights into the connectedness of curricular outcomes K to 6.

The post secondary audience was very receptive, with many expressing surprise that the Elementary curriculum does indeed introduce very fundamental relationships quite early. Members of the audience agreed that negative attitudes are indeed a huge block to learning mathematics at every level, including University and gained some new appreciation for the need to engage students visually and spatially before jumping into the symbol system when working with Elementary age learners. They agreed that exploration and problem solving were important goals to pursue and that we all agree knowing number facts is only one small piece of the puzzle. Deciding where to place relationships and number properties is a new challenge they are considering. Other points covered included acknowledgement and understanding of the lack of specialized knowledge among the majority of Elementary and the need to work together to support them not criticize. It was a powerful revelation for some to realize that an elementary teacher is a generalist with 7 to 9 courses to teach all of which demand they "know" content to a deep level.

There was certainly agreement that a focus on Equality and the Equal sign should precede work with equations.

The audience were invited to visit and peruse the EMPLO site and to reflect on how they might contribute feedback, constructive criticism, examples of misconceptions that will inform our work.

Questions from the floor focused on:

Concern for Junior High students being shown rigid rules that are making the work nonsensical... Show your work has become a torture rather than a meaningful explanation that demonstrates understanding. I responded that the curriculum does not require specific procedures be taught for exactly this reason. In the present curriculum teachers are encouraged to have students compare and evaluate strategies.

Students are encouraged to explain a strategy or a solution using number properties.

Someone asked if equivalence would be a better start point than equality and the equal sign....

Someone asked "do teachers also make clear that subtraction is not commutative? This brought the discussion around to the need for students to learn inverse operations and where that is made clear in the program of studies.



Hi Geri,

Thanks for the message you conveyed at the AMD. I do believe that the way to go is cooperation and mutual help. I was going to talk to people of my math department at Nait next week, and I was going to show that website you presented at the AMD, with the request that if anyone has time and will, they could peruse it and provide you with the feedback you were asking. I know many people are busy with their own PD, but I thought that maybe there will be a couple that will provide some feedback. Thanks, Cornelia From: Cornelia Bica < cbica@nait.ca>

Hello Geri,

I attended your session at the Alberta Mathematical Dialogue, held recently at Mount Royal. I would like to know more about your project and also to share the information with a friend who works with the Red Deer Catholic School Division and is very interested in your project. I do not seem to be able to find it. Can you send me those links again? Also, if you plan to be in Red Deer in the near future, would you be interested in chatting with my contact about it? **Roberto Bencivenga** Mathematics and Statistics Instructor | School of Arts and Sciences **Red Deer College**

PROVIDING THE SUPPORT TO KEEP TEACHERS EVOLVING: FINAL REFLECTIONS

Teachers who participated in any of the Mathematics PD offered by NRLC this past year, state that their personal learning is substantial, but taking the risk to transfer it to the classroom is very discomforting and stressful. Participating in real tine demonstrations in the classroom, analyzing and evaluating video that highlights student thinking and reasoning, practicing scripts of worked examples for lessons and discussions, coaches in the classroom and opportunities to then sit with colleagues to share experiences and build new connections are all critical components of what teachers describe as effective professional development that helps them transform their thinking and practice.

TEACHERS ALSO AGREE THAT TEACHING in the 21st CENTURY requires that they **RELEARN** mathematics in a way that makes the learning a sense making process, helping them to understand and connect big ideas and how they emerge and develop across a span of grades. This is not simple, short term work. It takes hours and hours of learning time... A fact that is clearly supported in research :

When teachers receive well-designed professional development, <u>an average of 49 hours spread over six to 12</u> <u>months</u>, they can increase student achievement by as much as 21 percentile points (Yoon, Duncan, Lee, Scarloss, and Shapley, 2007).

On the other hand, learning events, workshops, no matter how well intended or orchestrated that <u>are spread over</u> <u>14 hours</u> or less show no statistically significant effect on student learning

(Darling-Hammond, Wei, Andree, Richardson, and Orphanos, 2009). Well-designed professional development provides for the following (Darling-Hammond et al., 2009):

- Collaborative learning facilitated by a source of content Expertise: Teachers have opportunities to learn in a supportive community that organizes curriculum across grade levels and subjects. Overwhelmingly they prefer face to face interactions. The learning must be guided by professionals in the field who possess a deep connected understanding of content, of pedagogy and of learning.
- Links between curriculum, assessment, and professional-learning decisions in the context of teaching specific content: Particularly for math and science professional-development programs, research has emphasized the importance of developing math and science content knowledge, as well as pedagogical techniques for the content area

(Blank, de las Alas, and Smith, 2008; Blank and de las Alas, 2009; Heller, Daehler, Wong, Shinohara, and Miratrix, 2012).

- Active learning: Teachers apply new knowledge and receive feedback, with ongoing data to reflect how teaching practices influence student learning over time. Again this needs to be face to face and it needs to be fueled and fed by the prompting of outside expertise. The right questions and examples at the right time to re ignite the inquiry.
- Deeper knowledge of content and how to teach it: Giving teachers materials to try, telling them about techniques for designing engaging lessons, telling them to collaborate and share does not work. The work of teaching in the 21st century demands teachers personally engage in learning mathematics for understanding from "experts" who have indeed taught for understanding. Teachers are often required to UNLEARN content in order to re-learn in ways that demonstrate connectedness and reasoning. (Ball et al , 1999, 2004)
- Sustained learning events, convened over multiple days and weeks: Professional-development efforts that engage teachers in 30 to 100 hours of learning over six months to one year have been shown to increase student achievement.

Once again we acknoledge: the issues teachers and administrators bring forward around the need for sustained and uninterrupted TIME for study run wider and deeper than the scope of NRLC's influence.

Time should be allotted for mathematics teachers to study and compare the Alberta curriculum as written with the day to day curriculum they are enacting and assessing in their classrooms – at, above, and below the intended grade level or course they teach. Teachers need opportunities to interact with colleagues as they study the math they are charged with teaching, under the guidance of **content area researchers and specialists**, well versed in the learning progressions that are considered to bring the most affect to the most number of students. PLCs that leave teachers to "learn from each other" are doomed to fail when no outside eyes are available to provoke and challenge the "status quo."

There is a troubling trend that continues to flood the field, PLCs organized around a misplaced belief that teachers can lead themselves to "best practice" if we just put them together in groups.... The learning demanded of teachers if they are to be successful in meeting the needs of students, the demands of curriculum and the expectations of the Ministerial Order for Student Learning require access to Instructional, Curricular and Content **EXPERTISE** that is constantly evolving to meet the changing needs of our students and their families.

Helping teachers and administrators to break free of long standing habits of thinking, doing and assessing in classroom practice around mathematics teaching and learning requires the support of Critical Thinkers who sit outside and can challenge existing school norms, myths and ways of "doing". Critical Thinkers who can walk the talk with students and with parents, who can model the teaching, not just talk about it.

NRLC can support but not direct the actions of Districts and Schools to challenge teachers in their learning, to challenge administrators in their support of teacher learning, to include outside expertise into the PLCs, to build long term approaches to continual learning that focus on connecting initiatives for change, that focus on critical thinking, that develop networks for support that weave teaching and learning together to meet the needs of all learners by growing connections and pruning out dead ends... As a consortia we can be vigilant and thorough in our research as we search out speakers, workshop leaders and professional learning facilitators to provide support that aligns with the ALBERTA curriculum, content, process and competencies but as the old saying goes: "you can lead a horse to water..... but who bears the responsibility for making the expectation clear that the horse must drink?"

"Teachers and others know enough not to take change seriously unless local administrators demonstrate through continuing actions that they should." (Fullan, 1994)

Administrators, at all levels of the system, must actively <u>demonstrate enduring</u> support for the school management practices, teacher learning opportunities, process coaching, expert consultations, vivid demonstrations of alternative practices, and inquiry groups, that must be a part of the plan for change. That enduring support must continue <u>for years, not months</u>. They must budget for the continuing cost of resources needed to actualize the <u>innovation within every classroom</u>, They must develop and maintain an information system that provides feedback and regular updates as to how the implementation is progressing and they must demonstrate active knowledge and understanding of the <u>expected change</u> and the processes required to actualize the intended change within every classroom. (Fullan, 2010). Spatial skills form the foundation for how humans learn to think and reason (Lorway, 2016). Knowing how to learn is one of the ten competencies identified in the Ministerial Order on Student Learning, May 2014, Alberta. Therefore understanding how to develop, apply and extend spatial reasoning skills should be a goal shared with all students of mathematics and science (Lorway, 2016).

What is Spatial Reasoning?

Researchers and theorists in the areas of cognitive psychology, art, science, math, and engineering education use the words *visual* and *spatial* in combination with the words *cognition, ability, skill, orientation, perception, reasoning, relations, rotations and imagery* among others, in their attempts to more precisely classify and label the set of mental abilities that fall into the category of spatial thinking or spatial reasoning.

The National Research Council, 2006 suggested three components to spatial thinking:

- concepts of space
- tools of representation
- processes of reasoning



Figure 2



Spatial thinking/reasoning includes a range of skills and tools the

- brain and body use to:
 - interpret, connect and make sense of everything seen, heard, and experienced
 - store and retrieve understandings and information for present or future applications
 - construct and present oral, written and acted out performances that demonstrate understanding, knowledge and mastery.

Davis et al (2015) offer a preliminary list of dynamic processes that characterize spatial reasoning specifically as it relates to teaching and learning mathematics, offering them to teachers as a starting point for recognizing whether a lesson might be tapping into spatial reasoning.

Figure 3



- Locating
- Orienting
- Decomposing/recomposing
- Shifting dimensions
- Balancing
- Diagramming
- Symmetrizing
- Navigating
- Transforming
- Comparing
- Scaling
- Visualizing

Figure 4



Where would you place 27 on this numberline.? Explain.



Where would you place 27 on this numberline?

Why is Spatial Reasoning Important?

The 2006 National Research Council report "Learning to Think Spatially" identified the importance of spatial thinking to the success of all students across all learning in all subject areas. Research since that report continues to identify spatial reasoning as a key, but often overlooked, component for improving student performance in all STEM related subjects (See Cheng & Mix, 2012; Davis et al, 2015, Gunderson et al., 2012, Newcombe, 2014).

Strong spatial thinking skills in grade school have been demonstrated to be significantly connected to student achievement in **mathematics and science** through high school and into adulthood (Kell, Lubinski, Benbow, & Steiger, 2013; Wai, Lubinski, & Benbow, 2009; Wai et al., 2010). Spatial skills are now recognized as a fundamental part of mathematics education that has been downplayed or ignored in school mathematics. (Davis et al., 2015)



The connection between mathematics and spatial reasoning

arithmetic word problems measurement geometry

is not limited to any one strand of mathematics.

calculus

Spatial reasoning plays a role in:

From a longitudinal study involving 400,000 students, Wai and colleagues (2009) concluded that spatial skills assessed in high school predicted which students would later enter and succeed in disciplines related to science, technology, engineering and mathematics. Moreover, spatial thinking was a better predictor of mathematics success than either verbal or mathematical skills. Taken together, the above research findings paint a clear picture: when it comes to mathematics, spatial thinking matters.



 $(x+y)(x+y) = x^2+2xy+y^2$

Researchers in mathematics education, psychology, the cognitive sciences and neurosciences are currently mapping these relationships. (See Hubbard et al., 2005; Mix & Cheng, 2012; Umilta, Priftis, & Zorzi, 2009 for reviews).

statistics and probability

Figure 7

Moreover....

algebra

36 tenths 3 hundredths

How else can you express this decimal fraction?

There is clear evidence that children who develop spatial representations of number **in the early years** are able to build on this knowledge base as they progress to more complex numerical concepts such as place value (Mix, Prather, Smith, & Stockton, 2013).

Figure 6

Algebraic manipulations require transforming the structure of a given equation into one of a more manageable form. The required spatial thinking is appropriately developed in the earlier grades by providing students the opportunity to play with the visual structure of equations: have students fill in the missing term of $6 + 7 = _ + 8$, for example, as opposed to purely a computational problem implied by a single blank after an equal sign, $6 + 7 = _$, for instance.

Mix & Cheng (2012) provide evidence that students who receive spatial training can improve significantly on missing term problems.

As this simple example shows, spatial reasoning is not just the purview of geometry, measurement, or non routine problem solving. Basic computation skills and facts are more likely to be learned, remembered and confidently recalled when teaching and practice activities are developed around models that prompt and promote spatial reasoning. The practice is more mentally and physically engaging to students because it requires them to continually refine their communication, critical thinking and mathematical reasoning skills as facts are internalized.

CALL TO ACTION

The Alberta Program of Studies for Mathematics already identifies visualization as a process skill that provides students with opportunities to understand mathematical concepts and make connections among them. Reference is also made to the importance of spatial sense, spatial reasoning, and spatial skills. The document directs teachers to design learning events that move students from the concrete through the pictorial to the symbolic, a progression that certainly implies the application of spatial reasoning skills. Given the wealth of research outlining the close relationship between spatial thinking and student learning we agree with the Spatial Reasoning Study Group (Davis et al, 2015). It is now time to deliberately "spatialize" implementation of the curriculum. With that goal in mind we have begun work on the following tasks

1.) Creating a document tracking both visualization and spatial reasoning every time one or both are linked to specific outcomes in the Program of Studies. (The process skills of reasoning and visualization are infused into approximately 90% of the outcomes.)

2.) Creating a document tracking the emergence and development of key mathematical concepts as they emerge and connect across the curriculum K to 9.

3.) Linking the two documents into one larger document that tracks and makes clear the evolution of the mathematical concepts students experience and must master throughout the K to 9 curriculum and illustrates the consistent pivotal role spatial reasoning plays in the learning and teaching of those concepts. This document will be housed on the EMPLO site.

Now is the time to focus on how the call for spatial work in the Program of Studies is being actualized in the teaching and learning of mathematics in classrooms across Alberta.

The document we are creating will provide examples of what it looks, feels and sounds like when students and teachers are engaging through spatial reasoning. We must take action to

- provide teachers the time and opportunity to develop, practice and refine their ability to use those examples in their teaching
- gather evidence that teachers are confidently and purposefully infusing spatial reasoning into their teaching
- design and deliver instruments and tools that evaluate the impact on student achievement.

We are lobbying for the provision of long term funding, 3 years minimum, to support the development and delivery of learning opportunities that provide all teachers time to develop, practice and refine their ability to teach and assess mathematics as a SPATIAL SKILL. The research around teacher learning makes clear that in order to impact students' achievement the learning opportunities must engage teachers over time. When teachers receive well-designed professional development, an average of 49 hours spread over six to 12 months, they can increase student achievement by as much as 21 percentile points (Yoon, Duncan, Lee, Scarloss, and Shapley, 2007). On the other hand, learning events, workshops, no matter how well intended or orchestrated that are spread over 14 hours or less show no statistically significant effect on student learning (Darling-Hammond, Wei, Andree, Richardson, and Orphanos, 2009).

Spatial reasoning, with very specific attention to visualization, is already called for and embedded in the Alberta Program of Studies for Mathematics. The time is now to support teachers in actualizing it into their instruction and assessment.

Appendix for Figure 1.



Is the learner able to recognize without counting each dot that the two collections are equal. Both equal 8 and both can be described with a variety of equations.

Two, three and five are the subitize collections. The brain recognizes without counting. Are they used to identify these two collections are equal without counting every dot. (Automatic recognition). Can the student explain his or her reasoning:

- I see 5 in each because I have been practicing seeing 5.
- I see 4 and 4 in each because I like to "play" with doubles.
- I think 2 + 3 = 5 then 3 more is 8 because I having been practicing seeing twos and threes.
- I just looked and knew each collection is 8.

Does the learner recognize and apply the term equal to describe the relationship between the two collections?

Does the learner recognize the relationship can be recorded in a variety of equations: not limited to 8 = 8 5 + 3 = 8 8 = 3 + 5 8 = 4 + 4 4 + 4 = 5 + 3 4 + 4 = 8 2 + 3 + 3 = 8 2 + 3 + 3 = 5 + 3Is the learner able to record an equality to describe the relationship?

Is the learner able to describe the difference between the two arrangements using positional language:

- Look at the collection on the right. If you slide the dot that is on the right side of the bottom row up to be the last dot in the top row, you see the collections are the same.
- Look at the collection on the left. If you slide the dot that is on the far right in the top row down to be the far right in the bottom row, the collections are the same.

In the example above do you see evidence of these spatial skills? Orienting/Locating Decomposing/Recomposing Transforming Comparing Visualizing

Outcomes from the Alberta POS, 2007, Updated 2014

Kindergarten:

- o Subitize and name familiar arrangements of 1 to 5 objects or dots. (C, CN, ME, V)
- o Relate a numeral, 1 to 10, to its respective quantity. [CN, R, V]
- o Represent and describe numbers 2 to 10, concretely and pictorially. (C, CN, ME, R, V)
- o Compare quantities 1 to 10, using one-to-one correspondence. (C, CN, V)
- Sort a set of objects based on a single attribute, and explain the sorting rule. (C, CN, PS, R, V)

Grade One:

o Subitize (recognize at a glance) and name familiar arrangements of 1 to 10 objects or dots. [C, CN, ME, V]

- o Demonstrate an understanding of counting by:
- indicating last number said identifies "how many" showing any set has only one count
- o Represent and describe numbers to 20, concretely, pictorially and symbolically. [C, CN, V]
- o Compare sets containing up to 20 elements, using: referents [C, CN, ME, PS, R, V]
- $\circ~$ Demonstrate an understanding of conservation of number. [C,R,V]
- o Sort objects, using one attribute, and explain the sorting rule. [C, CN, R, V] The attribute of these sets is equality
- Record equalities, using the equal symbol. [C, CN, PS, V]

Grade 2:

• Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18. [C, CN, ME, PS, R, V] All the strategies are related to having a rich and connected understanding of the parts of the whole that represents a number. This task is a pre-requisite to success with number facts.

Visual images and visual reasoning are important components of number, spatial and measurement sense. Number visualization occurs when students create mental representations of numbers. Being able to create, interpret and describe a visual representation is part of spatial sense and spatial reasoning. (AB POS, 2007,2014 p6)

As part of the study of mathematics, students look for relationships among numbers, sets, shapes, objects and concepts. The search for possible relationships involves collecting and analyzing data and describing relationships visually, symbolically, orally or in written form. (AB POS, 2007,2014 p8)

Appendix for Figure 3.



Thinking about the task card:

Can the learner keep the black outline as one whole. Identify it as 1 or $\frac{1}{1}$. Can the learner rename the whole using fraction forms. In my mind, I slide the small blue square to the right to sit directly under and touching the long blue rectangle. Now it appears that the blue section is approximately one third $\frac{1}{3}$ of the whole. I could rename the whole as $\frac{3}{3}$. Do you see it? Do I need to draw it for you? It now appears to me that the small blue square is one third of the one

third of the whole. That makes it one ninth or the blue rectangle is three ninths $\frac{3}{2}$ which means I could rename the whole as nine ninths $\frac{9}{2}$. Can

you see it? Do you need me to draw it?

In the card above I "see"
$$1 = \frac{1}{1} = \frac{3}{2} = \frac{9}{2}$$

Now if you want to play: Imagine the blue represents one whole, imagine outside square represents one half of a larger square, imagine you split the small blue in to 3 equal pieces. Imagine if you doubled the amount that is blue.... Is there any value to pursuing these kinds of questions? I say yes because they open the door to engaging more learners in more explaining, drawing and learning.



Here are 2 ideas students challenged me with: Is the diagram above $\frac{6}{9}$ of 2 or ? of 1.

What fraction of the diagram to the left is blue?

In this example above do you see evidence of these spatial skills? Orientina Decomposing/Recomposing Diagramming **Transforming** Comparing Scaling Visualizing Fraction Outcomes: Alberta POS Grade 3: explaining that a fraction represens a part of a whole (C, CN, ME, R, V) Grade 5: Determine the pattern rule to make predictions about subsequent elements. (C, CN, PS, R, V)Demonstrate an understanding of fractions by using concrete, pictorial and symbolic representations to: create sets of equivalent fractions compare fractions with like and unlike denominators. (C, CN, PS, R, V) Grade 6: Demonstrate an understanding of factors and multiples by: solving problems using multiples and factors. [CN, PS, R, V] Relate improper fractions to mixed numbers and mixed numbers to improper fractions. [CN, ME, R, V] Students can explore and record results, analyze observations, make and test generalizations from patterns, and reach new conclusions by building upon what is already known or assumed to be true. (AB POS, 2007, Update 2014)

Appendix for Figure 5.



What will change if I do this? What's your proof?







Can you apply what you know to solve this? Can you relate to division?

7200 ÷ ? = 90 can you think 90 x? = 7200

32 ÷ ? = 8 Can you think 8 x ? = 32





Symbolic: What will this "look like" as a distribution?

74 x 63 Is this one way to distribute? (60+4)(70+3)?

Can the learner explain how to build the image on the card in a meaningful way using a concrete material.

Does the explanation provide for partial products?

Can the learner explain the how the partial products emerge.

Is the learner comfortable with multiplying and adding parts in any order?

Does the learner demonstrate place value understanding in explaining how the partial products emerge.

Can the learner explain and record equations that demonstrate the distributive property, the commutative property?

Is the learner able to identify when distribution equations are true and match them to the "standard" equation?

Is the learner able to use the model to explain how multiplication and division are related?

Can the learner accurately solve and verify the solution for 2 digit by 2 digit multiplications.

Can the learner apply multiplication facts to solve division problems.

When multiplication is introduced as outlined by the curriculum document from Grade 3 to Grade 5 array and area models are a way of seeing and thinking for students. This visual image represents the pictorial step in demonstrating an understanding of any algorithm for solving multiplication.

The intent of the visual is to provide a clear and meaningful connection between symbolic algorithms for multiplication of multi digit numbers and the commutative and distributive properties. This image is so rich and engaging that when practiced with intent, students can accurately solve double digit multiplications in their heads.

The image also connects division to multiplication in a very powerful and meaningful way by making clear the inverse relationship between the two.

Outcomes from the Alberta POS, 2007, Updated 2014

Grade 3:

Demonstrate an understanding of multiplication by: • representing and explaining multiplication using equal grouping and arrays • modelling multiplication using concrete and visual representations, and recording the process symbolically [C, CN, PS, R]

Grade 4:

Describe and apply mental mathematics strategies ,to determine basic multiplication facts to 9 × 9 and related division facts. [C, CN, ME, R] Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by: • using personal strategies with and without concrete materials • using arrays to represent multiplication • connecting concrete to symbolic representations • applying the distributive property. [C, CN, ME, PS, R, V]

Grade 5:

Apply mental mathematics strategies and **number properties** in order to understand and recall basic multiplication facts and related division facts. [C, CN, ME, R, V] Apply mental mathematics strategies for multiplication • using the distributive property. [C, CN, ME, R, V] Demonstrate, with and without concrete materials, an understanding of multiplication (2-digit by 2-digit) to solve problems. [C, CN, PS, V] Learning mathematics includes a balance between understanding, recalling and applying mathematical concepts. Concepts should be introduced using manipulatives and be developed concretely, pictorially and symbolically

Problem solving, reasoning and connections are vital to increasing mathematical fluency and must be integrated throughout the program. (AB POS, 2007, Updated 2014 p10)

Visual images and visual reasoning are important components of number, spatial and measurement sense. Number visualization occurs when students create mental representations of numbers. Being able to create, interpret and describe a visual representation is part of spatial sense and spatial reasoning. (AB POS, 2007, Updated 2014 p6)

As part of the study of mathematics, students look for relationships among numbers, sets, shapes, objects and concepts. The search for possible relationships involves collecting and analyzing data and describing relationships visually, symbolically, orally or in written form. (AB POS, 2007, Updated 2014 p8)

Appendix for Figure 5 continued further....



The Concrete: A concern in having students build at this point is that they will go back to counting. The build should be performed in parallel with encouragement to predict and see what will fit in the corners without actually counting out blocks. I would challenge that a student who needs to physically build at this point has not been provided the rich background assumed in the progression in the POS. By this point students should have clear imagery for 2 digit number and for the two directions that multiplication grows in... Filling in the rectangle can then be accomplished as a blend of seeing physically and mentally.



The side lengths are only referents. Some students prefer not to use them.





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