

K-3 Numeracy/Literacy Report
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For further information, contact

Dennis Belyk
Executive Director
Alberta Education
Learner Assessment Branch
Harley Court
10045 111 Street
Edmonton, Alberta T5K 2M5

Telephone (780) 427-0010
Toll free in Alberta by dialing 310-0000
Fax: (780) 422-4200

This document is intended primarily for:

System and school administrators
Teachers and support staff
School board trustees
Post-secondary institutions academic upgrading staff and administration
Alberta Education managers

And may be of interest to:

Individuals interested in school improvement and improving high school completion rates

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Table of Contents

- Executive Summary 1
- Purpose..... 3
- Background..... 3
- Links to Other Alberta Education Projects/Initiatives 4
- Methodology 4
- Limitations 6
- Responses to Consultation 7
- What We Heard from Parents- An Overview 7
- Key Findings from Parent Responses 8
- Submissions from Schools, Jurisdictions and Associations 8
- Summary of Individual stakeholder responses 11
- What We Heard from Stakeholder Associations 11
- Findings from Literature Review 13
- Synthesis- Key Themes..... 15
- Recommendations..... 18
- Appendix 1 – Stakeholder Advisory Committee..... 21
- Appendix 2 – Backgrounder and Consultation Questions..... 22
- Appendix 3 – Parent Reponses from Consultation Meetings 27
- Appendix 4 – Individual Stakeholder Responses 36

Executive Summary

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning, and to address the needs of the group of students not achieving the literacy and numeracy standards by Grade 3 that they would need to be successful throughout their schooling.

A stakeholder advisory committee including organizations that represent school boards, superintendents, principals, teachers and parents was formed to provide input and advice on the consultation (see Appendix 1), and to help develop background documents and a set of questions to be used in the consultation process. (See Appendix 2)

The stakeholder committee also provided advice on the consultation process, which included the sharing of information about the consultation with key stakeholder groups, and posting of the information on Alberta Education's website for individual and/or group response.

The consultations included meetings with groups of parents in five centres across the province and with parents of First Nations and Métis children. The parent meetings were conducted by facilitators from Alberta Community Development. Stakeholder organizations were also encouraged to conduct consultations and to make submissions. The consultation was supported by a research analysis by Alberta Education staff members. This report prepared by Alberta Education, represents a draft review and analysis of findings from the meetings, submissions, and the literature review.

The key themes that emerged from the process were:

- *Better program of diagnostic assessments and remediation are needed*
- *A variety of formative and diagnostic assessments are needed to help inform instructional strategies and decision-making premised on appropriate user supports*
- *Early intervention is key to success*
- *Better communication with all involved (including parents)*
- *More focus on numeracy and literacy in the early grades*
- *More support, resources and funding generally, but specific also to teacher training and professional development and smaller classes*
- *Better interagency co-ordination*

From these themes, eight recommendations were developed in collaboration with the advisory committee.

- 1. That Alberta Education, with education stakeholders, research, develop and communicate working definitions of numeracy and literacy related to Alberta Education's Programs of Study.**
- 2. That Alberta Education, with education stakeholders, develop and disseminate materials for teachers in defining and diagnosing developmental sequences linked to the Alberta Education curriculum, for Kindergarten to Grade 3.**

- 3. That Alberta Education identify and subsidize diagnostic resources for numeracy and literacy in Kindergarten to Grade 3 that would inform instructional practice and program development responsive to child and student learning needs.**
- 4. That Alberta Education develop pilot projects to deliver professional development on recommended literacy and numeracy diagnostic resources and interpretation thereof to support instructional practice.**
- 5. That Alberta Education continue support for ACOL recommendation 1, to establish parenting centres in communities across the province with close links to elementary schools.**
- 6. That Alberta Education fund, for populations deemed to be at risk, pre-Kindergarten and full-day Kindergarten programs with a focus on early literacy, early numeracy and parent involvement, consistent with the Goals of Education.**
- 7. That Alberta Education extend AISI cycles from 3 to 4 years, with year 4 of each cycle being devoted to reviewing the results achieved in order to institutionalize and disseminate promising practices and to optimize planning for the next cycle.**
- 8. That Alberta Education identify strategies for improving communications with parents regarding their child's learning.**

All recommendations with supporting comments and strategies are listed on page 18 of this document.

Purpose

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning, and to address the needs of the group of students not achieving the literacy and numeracy standards by Grade 3 that they would need to be successful throughout their schooling. The province-wide Kindergarten to Grade 3 (K-3) consultation with parents and stakeholders was undertaken to:

- Gather information to gain a better understanding of the education issues that impact early learning and assessment in literacy and numeracy
- Act on the information obtained to ensure all Albertan children are acquiring the literacy and numeracy skills needed for later life

Background

The Alberta Education News Release announcing the Grade 4 testing initiative provided some background information on the rationale of expanding provincial achievement tests to include Grade 4 students who do not achieve the acceptable standard on the Grade 3 provincial achievement tests.

It is ... important that we have a way to follow up with students [who do not achieve the acceptable standard on the Grade 3 provincial achievement tests] to make sure their learning needs are being met. As it stands now, students don't write another provincial achievement test until Grade 6. We want to follow up with these students sooner than that to make sure they are succeeding. This new test will provide extra information for teachers and school administrators about students' achievement in reading, writing and basic mathematics, and about the success of their instructional programs. This initiative provides system-wide assessment, which can tell us what is working and what is not, and where the system can focus its efforts and resources.

In support of the focus on ensuring success for all Grade 3 students, the Curriculum and Learning and Teaching Resources branches administered “an all” call to publishers in June 2004 for learning and teaching resources to support early literacy, early numeracy, diagnostic assessments and integration across subject areas for Kindergarten to Grade 3. There were many submissions and resources authorized for literacy, but few for numeracy. An annotated list of authorized resources is available on the Alberta Education Website at:
http://www.education.gov.ab.ca/k_12/curriculum/bySubject/kto3.pdf

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning. A stakeholder advisory committee including organizations that represent school boards, superintendents, principals, teachers and parents was formed to provide input and advice on the consultation (see Appendix 1), and to help develop background documents and a set of questions to be used in the consultation process. (See Appendix 2)

The stakeholder committee also provided advice on the consultation process, which included the sharing of information about the consultation with key stakeholder groups, and posting of the information on Alberta Education's web site for individual and/or group response.

The consultations included meetings with groups of parents in centres across the province (Grande Prairie, Edmonton, Red Deer, Calgary and Lethbridge) and with parents of First Nations and Métis children. The parent meetings were conducted by facilitators from Alberta Community Development. Stakeholder organizations were also encouraged to conduct consultations and to make submissions.

Additionally, the consultation was supported by a research analysis done by Alberta Education staff members. This report prepared by Alberta Education, represents a draft review and analysis of findings from the meetings, submissions, and the literature review. This document is intended to be reviewed by the Stakeholder Advisory Committee to help develop recommendations for submission, along with the summary report, to Alberta Education's Executive Team by March 2006.

Links to Other Alberta Education Projects/Initiatives

The results of this consultation project may have implications for, or be informed by other projects and initiatives of Alberta Education and the Alberta Child and Youth Initiative. Such projects may include, but are not limited to:

- The Alberta Commission on Learning
- The Accountability Pillar Initiative
- Literature Review of Assessment Strategies for Early Numeracy and Literacy
- The High School Completion Project
- The Speech Language Review
- The Provincial Approach to Student Information Initiative
- The Class Size Reduction Initiative
- The Student Achievement in Mathematics Project
- The Primary Programs Initiative
- The Management of Integrated Services for Children and Youth With Complex Needs and their Families: Guidelines for Alberta Regional Integrated Case Management Teams

Methodology

Based on input from the advisory committee, a set of five questions was developed to be used in consultation with parents and stakeholders pertaining to effective assessment practices in early literacy and numeracy. Face-to-face parent consultations were facilitated by a representative from Community Development in Lethbridge, Calgary (two meetings), Red Deer, Edmonton (two meetings) and Grande Prairie. Another session was completed in Edmonton with parents of First Nations and Métis children from around the province. These meetings were also attended by various representatives from Alberta Education, with the principal author of this document attending all sessions. Exact numbers of participants were not gathered by Community

Development, but an estimated 80-90 parents took part. This estimate is substantiated by the fact that the facilitator asked each parent to provide one response for question five, and overall 91 “key points” were gathered. The questions discussed in those sessions were:

1. In your view and experience, how do young children learn? (This question was initially design to stimulate discussion.)
2. In your view, what do you think are the most effective ways to ensure children are developing literacy (language skills) and numeracy (mathematics skills) in their early years at school? (This question was split into three separate questions during group discussions)
3. Describe what method you would use in order to know that what you are doing with a child is working. What would you be looking for? Once a child’s learning has been assessed in some way, what can be done to help the child excel? (This questions was divided into two separate questions for group discussions)
4. What more do you think the school, the school jurisdiction, and the government could do to assist all children’s learning? How could you help the school?
5. Of all the things that have been considered, what do you feel is most important? What are the key ideas?

As stated above, the facilitator divided question two in the parent discussion into three categories so that both numeracy and literacy were discussed together as well as separately. Likewise, two separate questions were extracted from question three to differentiate between how to best assess a child’s learning and the follow-up activities (See table 1 page 7).

Qualitative analyses of the responses from the parent consultation sessions and from the submissions received were conducted by research staff from Alberta Education. In this, responses were codified and grouped according to theme where possible so that results could be aggregated and major themes more easily illuminated. Submissions from the larger stakeholder associations were likewise reviewed and the major themes for each question from each association were isolated where possible.

Out of respect for the participants, schools, jurisdictions and associations that took part in the consultation, and in order to ensure transparency in reporting, this report provides a brief encapsulation of what was heard from each of the following three main input sources:

- 1 – Input received from face-to-face parent consultations;
- 2 – Input received via submissions from individuals and groups;
- 3 – Input received from the larger stakeholder associations.

The information was synthesized so that recommendations could be developed in collaboration with the advisory committee, related to the overarching themes.

Limitations

The following limitations should be regarded when reviewing the information:

- The project timeline, running from June 2005 to January 2006, was quite short. In that time questionnaires were designed, consultations were done around the province, and responses were compiled. A preliminary report needed to be ready for the stakeholder advisory committee and an internal committee from Basic Learning in order to generate recommendations.
- Parents were chosen and asked to participate by the school principal. Although steps were taken to help ensure that the parents consulted were drawn from a wide range of differing views and experiences, Alberta Education cannot verify that was the case.
- Because this was a qualitative method employing open ended questions, a vast number of responses were recoded for each question. An attempt was made to code and group responses so that themes might emerge from the information. However; if a topic area was remarked upon more than once in a given response, it was not coded twice. Similarly, the facilitator at the consultation sessions did not re-capture themes that had already been expressed. As a result, the frequency tables produced in this report are not generally indicative of how many times the given responses were heard, but merely the count of recurring themes.
- The set of questions used was not necessarily consistent throughout user groups.
- Two different sets of questions were distributed to individual stakeholders asking for their responses. For the purpose of analysis, the two sets of questions were equated. In the event that a school, jurisdiction or individual answered both sets of questions, both were considered as one response and not double counted.

Responses to Consultation

What We Heard from Parents- An Overview

Table 1 lists the top five responses to each question with ranks and percentages. A full list of responses can be found in Appendix 3.

Table 1- Top Five Parent Responses (Based on Percentages) from Each Question

Ranks	How do young children learn	Most Effective way- Numeracy and literacy	Literacy	Numeracy	Method to know Child is Learning	Once assessed...	What more can be done	Key Points
1	Exposure/ Modeling (20.3%)	Involve Parents in Formative Assessment/ Communication (15.8%)	Focus on Basics (13.8%)	Hands on/ Manipulative Concrete Examples (29.4%)	Misc. Comment (23.0%)	Make resources/ Support available (22.1%)	Involve Parents/ Communicate with Parents (22.4%)	Involve Parents/ Communicate with Parents (17.6%)
2	Variety (18.0%)	More/Better Resources (14.9%)	Exposure/ Modeling (13.8%)	Focus on basic skill Development (8.8%)	Teacher Observation (9.5%)	Misc. Comment (20.8%)	More Resources/Funding (22.4%)	More Support/ Resources (15.4%)
3	Repetition/ Routine (10.9%)	Differentiated instruction (9.8%)	Involve Parents in Formative Assessment/ Communication (10.8%)	Repetition (8.8%)	Variety of Assessments (8.7%)	Course of follow-up action (18.2%)	Involve Community (6.0%)	Differentiated Instruction (9.9%)
4	Hands on (7.0%)	Smaller Classes (7.0%)	Early Assessment/ Intervention (9.2%)	No Calculators/ Computers (5.9%)	Involve Parents in Formative Assessment/ Communication (7.9%)	Involve/ Educate Parents in Options (14.3%)	Acknowledgement of Differentiated Learning Styles (6.0%)	More Consistency between Schools/ Teachers (8.8%)
5	Hypothesis Testing (6.3%)	Make it Fun/Relevant (5.6%)	Formative Assessments (6.2%)	Involve Parents in Formative Assessment/ Communication (4.4%)	Formative Assessment (6.3%)	Confirm (6.5%)	Misc. Comment (6.0%) Smaller Classes (6.0%)	Smaller Classes (6.6%)
Total %	62.5% of 128	53.1% of 215	53.8% of 65	57.3% of 68	55.6% of 126	81.9% of 77	62.8 % (67.8) of 67	58.3% of 91

- In total, 837 responses were recorded from approximately 90 individuals.
- 83 responses (about 10%) related to more or enhanced resources (such things as French phonics books, librarians, teacher aids etc) were recorded.
- Supplemental input was recorded as separate items in each category and coded as “Miscellaneous comments”. The largest number of miscellaneous comments recorded pertained to the questions regarding what method should be used to determine what the child is learning, and what to do once a child has been assessed. Comments here included such things as “parents should be compensated for getting help” and “equal funding for schools”.

Key Findings from Parent Responses

The overall key themes organized by sub-theme heard from parents were as follows:

Instruction

- Instruction should be consistent with the child's learning style.
- A variety of methods should be used for assessing a student's learning needs as children have differing learning styles.
- Focus on basic skills in the early years (focusing the curriculum more on literacy and numeracy).

Assessment

- Use assessment formatively and involve parents in the learning process.
- Teacher-based diagnostic assessment used to inform instruction, communicated to parents, is a good strategy to ensure students are learning.

Communications/Involvement of Parents and others

- Better integration of community supports.
- Involve parents through better communication with parents to empower them to help their children.
- Take steps to ensure more consistency between schools/teachers.

Resources/Funding

- Better resources and information for parents should be available to help them help their children.
- Support in the form of resources/funding to help guide actions based on assessments.
- More/stronger resources to help parents and teachers follow through post-assessment.
- Smaller classes.

Submissions from Schools, Jurisdictions and Associations

Following is the thematic analysis based on individual and group submissions from school, jurisdictions and associations. Submissions were received from a variety of respondents including teachers, principals, board members, and entire boards. There were 26 responses from schools, 18 from jurisdictions, and four from other organizations such as libraries and adult or family literacy organizations. The responses for questions 1-3 fell into one of the following categories:

Learning/instruction/methodology - responses that reflected strategies/methods related to learning and teaching.

Resources/Funding - responses that reflected resources (human and others) to support learning at home and in the classroom or responses relating to funding issues for resources.

Affective Factors - responses related to the atmosphere of the home and classroom that support the development of a positive disposition to learn.

Assessment - responses pertaining to assessing or determining students learning outcomes.

Other - any other response that does not fit specifically under any of the above categories but was a consistent and popular response.

If a response was applicable to more than one category, it was counted in each that it applied to.

Table 2 – Coded Q1. Responses from Individuals and Groups

Question 1 How do young children learn?		
Category	Number	Examples of responses (top responses)
Learning/instruction /methodology	139	Experience Repetition/routine Hands-on Modeling
Affective Factors	32	Healthy environment Interest/Internalization
Assessment	8	Self assessment Use authentic assessment
Involve Parents	7	Communicate
Other	7	Research Single grade classes

Table 3 – Coded Q2. Responses from Individuals and Groups

Question 2 What do you think are the most effective ways to ensure that children are developing numeracy and literacy skills?		
Category	Number	Examples of responses (top responses)
Learning/instruction/methodology	173	Hands on/manipulatives Exposure to text/number Use a variety of approaches
Affective Factors	12	Emphasize literacy/numeracy rich environment Appropriate learning space/environment
Assessment	111	Use assessment results to inform teaching/provide instruction/intervention to help children improve Pre and post assessment Teacher observation/monitoring
Other	27	Involve parents/communicate Downsize curricular content Involve professional development Have adequate funding Provide resources to parents who need them Use parent volunteers

Table 4 – Coded Q3. Responses from Individuals and Groups

Question 3 Describe what method you would use in order to know that what you are doing with a child is working?		
Category	Number	Examples of responses (top responses)
Diagnostic assessment	95	Need to focus on individual , know child's baseline, pre and post testing, chart individual progress, diagnostic, checklists, one on one, IPPs
Formative assessment	196	On going , observation, portfolios, checklists, talk to child, questioning, pre and post testing
Summative Assessments	55	Standardized , summative
Individual Student Assessments	157	Set goals/targets and modify based on assessment Determine weaknesses and abilities Portfolios
Classroom Assessments	57	Create a challenging environment/enrichment Testing (comprehension, criterion referenced, standardized)
Other	83	Support from other staff for teachers Classroom assistance, more time for teachers and PD

Table 5 – Coded Q4. Responses from Individuals and Groups

Question 4 What more do you think the schools, jurisdictions, government, and parents could do to assist all children's learning?		
Category	Number	Examples of responses (top responses)
Schools	95	Provide more time for teachers/provide support Professional development Smaller classes Involve parents
Jurisdictions	131	More resources/funding Professional development Smaller classes More time for teachers/support More trained staff More equitable funding Full day Kindergarten
Government	24	More resources/funding Smaller classes Downsize curriculum Continue AISI

Table 6 – Coded Q5. Responses from Individuals and Groups

Question 5 Key Themes	
Category	Number
More support for teachers (PD, training, aids)	43
More Resources Funding	28
Differentiated Instruction, recognize different learning styles or needs	22
Focus on the basics, limit curriculum	13
Smaller Classes	12
Involve parents, communicate with parents	10

Summary of Individual stakeholder responses

The overall themes that emerged from the individual stakeholder responses gathered via submissions were:

- Instruction should include a variety of strategies that meet the needs of the learner (emphasis on constructivist approach and differentiation)
- More resources (including staff), and more funding are needed
- Assessment of a child’s learning should focus on formative or diagnostic information
- Teachers need support in the classroom with time, curriculum materials, and assistance
- Provision for professional development needs to be made for instruction (best practices) and assessment
- More time should be focused on numeracy and literacy (i.e better integration)
- Parents need to be more engaged in their child’s learning
- Communication with parents is vital

What We Heard from Stakeholder Associations

Submissions were received from the Alberta Teachers’ Association (ATA), the Alberta School Boards Association (ASBA), the Alberta Home and School Councils’ Association (AHSCA), the Association of Independent Schools and Colleges in Alberta (AISCA), and the College of Alberta School Superintendents (CASS)^[2]. The responses varied in length and format, and the wording to some of the questions was altered slightly. The main themes for each question, from each association (where possible) were recorded in Table 7. The responses from all associations were combined into a single response for each question, based on the themes that emerged.

^[2] The submission from CASS was recommendations that resulted from their discussions pertaining to the K-3 Initiative at the CASS Issues Forum, November 2005. Because they were not broken down as responses to the individual questions, they were captured only under question 5 - Key ideas.

Table 7 - Main Themes from Submissions by Stakeholder Associations

QUESTIONS	ATA	ASBA	CASS ¹	AHSCA	AISCA	KEY THEMES
How do young children learn?	<ul style="list-style-type: none"> - Addressing whole child through community – Diverse contexts - No “one size fits all” model 	<ul style="list-style-type: none"> - Not all children learn in the same manner - Instruction should be suited to match needs of students 		<ul style="list-style-type: none"> - Children learn when supported by a collaborative team - Parental involvement is important - Variety of learning styles should be accommodated 	<ul style="list-style-type: none"> - Variety of methods 	<ul style="list-style-type: none"> - Variety of methods with instruction matched to learning
What are the most effective ways to ensure children are developing numeracy and literacy?	<ul style="list-style-type: none"> - No “one size fits all” models - Early intervention (i.e. Jr. Kindergarten) making use of diagnostic assessments 	<ul style="list-style-type: none"> - Number of different approaches that have all been successful - Important to use assessments diagnostically, and develop strategies to assist students not meeting expectations - More focus on literacy and numeracy in the early years to the exclusion of other curricular programs 		<ul style="list-style-type: none"> - Early identification of learning challenges - Parental involvement and communication with parents - Differentiated instruction - Access to Reading Recovery, and integrated school library program - Appropriate sized learning groupings - Variety of appropriate assessments based on students needs - Develop tools for parents that will meaningfully convey their child’s abilities - Meaningful collaborative dialogue between parents and schools re: learning outcomes and progress 	<ul style="list-style-type: none"> - Mastery learning (Bloom) using diagnostic assessments and formative assessments that feed into instructional strategies - Well defined and administered assessment feeding back into instruction in professional learning communities - Parental involvement is important - Assessment drives instruction so it is very important to find the right assessment to assess the proper domain - Diagnostic tools are used to set targets and then numerous assessments are used to monitor for improvement (as per Bloom) - Early intervention is important 	<ul style="list-style-type: none"> - Diagnostic Assessments feeding into appropriate instructional strategies - Early intervention/identification - Parental involvement - More focus on numeracy and literacy
What do you do to know that a child is learning and once assessed what can be done?	<ul style="list-style-type: none"> - Ongoing formative evaluations (classroom-based) including diagnostic assessments to inform instruction, in place of the current Grade 3 PATs - Positive mention of CAMP although outdated 	<ul style="list-style-type: none"> - There is a wide variety of assessment tools and the professional judgment of teachers in interpreting results from a variety of sources is vital - Positive mention of CAMP although outdated - Accessibility to intensive diagnostic assessments for such things as dyslexia and ADD is problematic 				<ul style="list-style-type: none"> - Early diagnostic assessments and ongoing formative assessment to inform instruction and critical reflection by all (including parental engagement)

¹ The submission from CASS was recommendations that resulted from their discussions pertaining to the K-3 Initiative at the CASS Issues Forum, November 2005. Because they were not broken down as responses to the individual questions, they were captured only under question 5 - Key ideas.

QUESTIONS	ATA	ASBA	CASS ¹	AHSCA	AISCA	KEY THEMES
What more could the school, jurisdiction and government do?	<ul style="list-style-type: none"> - Government could do more to provide early intervention by way of Jr. Kindergarten and early childhood education programs - School boards could work at the community level to coordinate such programs - Implementation and evaluation of early childhood programs - responsibility of teachers 	<ul style="list-style-type: none"> - Government could put more of an emphasis on formative diagnostic assessments or assessment for learning rather than accountability 		<ul style="list-style-type: none"> - Schools could do more to develop professional learning communities committed to SBDM, and by engaging parents in the process - Jurisdictions can further empower schools and parents in SBDM - Early intervention programs in all Kindergarten classrooms - Government can do more to ensure parents have adequate information about curriculum and their child's expected outcomes 	<ul style="list-style-type: none"> - At the school level, the use of adaptive tests from WCP to set targets have been very useful - Funding for programs like Reading Recovery or Balanced Literacy - More government support 	<ul style="list-style-type: none"> - Government provision of tools, programs and support for early intervention and diagnostic assessments - More emphasis on assessment for learning - Better coordination of programs/interventions - Tools to facilitate parental involvement
Key points	<ul style="list-style-type: none"> - Full day and Jr. Kindergarten programs for students at risk - Universal early childhood development/intervention initiatives - Early intervention or screening to catch problems early - Better communication of best practices from AISI - Encourage school, family, community partnerships - Develop diagnostic assessments 	<ul style="list-style-type: none"> - Focus the curriculum so that teachers/schools can focus more on literacy and numeracy in the early grades - More teacher in-service and pre-service professional development (re: assessment expertise) - More funding for interventions such as Reading Recovery 	<ul style="list-style-type: none"> - Update the diagnostic reading and math programs - Support teachers in the development of instructional strategies for students with diverse needs - Identify "best practices" 	<ul style="list-style-type: none"> - Student focused assessment for learning supported by collaborative learning environment between school and home 	<ul style="list-style-type: none"> - Expect different learning styles and abilities - Engage parents in education - Focus/narrow the curriculum in the early grades - Smaller classes and more funding 	<ul style="list-style-type: none"> - Early Intervention - Program of diagnostic assessments - Better communication with all involved - More teacher training in assessment - More focus on literacy and numeracy in early grades - Smaller classes and more funding generally

Findings from Literature Review

As noted above, Alberta Education also conducted a literature review related to assessment of early literacy and numeracy in order to support consultations on effective assessment and instruction. The literature review also included a summary of findings from AISI (Alberta Initiative for School Improvement) projects focused on these topics.

Educational assessments are used to make decisions specific to three main and interrelated domains: academic, behavioral (social), and physical (Ysseldyke and Salvia, 2004, p. 6). In these domains, three types of decisions are commonly made in and out of the classroom:

- 1) Diagnostic Decisions
- 2) Post-Diagnostic Decisions, and
- 3) Accountability/Outcome Decisions.

All of the literature researched and reviewed suggested conclusively that there is neither one best strategy for assessment, nor one best assessment tool to inform decisions on how to improve student learning in numeracy or literacy. However, the literature did overwhelmingly agree that using a variety of broad-based and multi-method formative and summative assessments contributes to the validity and reliability of the empirical base supporting the type of pedagogical decisions required to optimize learning for the student. Given the reality that such decisions must be made (whether for diagnostic, post-diagnostic or accountability/outcome purposes), there is also consensus in the literature that properly constructed and applied assessment tools provide data with a high degree of validity and reliability. These data aid the decision-making process. Students are well served by learning systems that have developed strong, holistic and integrated cultures of assessment, and that acknowledge the benefits of data-driven decision making.

An analysis of the AISI projects completed as part of this literature review suggested that good, but somewhat incomplete assessment work is underway in critically reflective contexts in some Alberta schools. Given the growing awareness that assessment expertise needs to improve, AISI has shown that some positive directions are emerging in this area. However, the incomplete nature of this assessment work points to the need for more comprehensive approaches to assessment, especially in the areas of diagnostic and post-diagnostic instrumentation and decision-making. These gaps argue for collaborative approaches to support the development and implementation of a range of formative instruments focused on primary numeracy and literacy skills to ensure Alberta's teachers have the tools necessary to be fully informed about their students' learning needs.

Synthesis- Key Themes

The following table combines the aggregated responses from parents, stakeholder associations, the literature review, and submissions received from schools, jurisdictions, principals and teachers.

Table 8 - Main Themes for Each Question by Subgroup of Respondent

QUESTIONS	PARENTS	INDIVIDUAL STAKEHOLDERS	STAKEHOLDER ASSOCIATIONS	LITERATURE REVIEW
How do young children learn?	<ul style="list-style-type: none"> - Variety of methods - Instruction should be consistent with the child's learning style 	<ul style="list-style-type: none"> - A variety of methods 	<ul style="list-style-type: none"> - Variety of methods with instruction matched to learning 	<ul style="list-style-type: none"> - Variety of tools to match a variety of needs
What are the most effective ways to ensure children are developing numeracy and literacy?	<ul style="list-style-type: none"> - Use assessment formatively and involve parents in the learning process - Focus on basic skills in the early years - Better resources and information for parents to help them help their children 	<ul style="list-style-type: none"> - Use a variety of methods - Use assessment results to inform teaching, instruction and as a intervention method - Involve parents -Focus the curricular content -Teacher observation/classroom based assessment - Provide resources to parents who need them 	<ul style="list-style-type: none"> - Diagnostic assessments feeding into appropriate instructional strategies - Early intervention/ identification - Parental involvement 	<ul style="list-style-type: none"> - Literature suggests using a variety of broad based and multi-method formative and summative assessments relative to Bloom's concept of instructing for mastery
What do you do to know that a child is learning and once assessed what can be done?	<ul style="list-style-type: none"> -Teacher-based diagnostic assessment used to inform instruction, communicated to parents -Support in the form of resources/funding to help guide actions based on assessments 	<ul style="list-style-type: none"> - Combination of diagnostic, formative and summative assessments focused on individual student's learning needs to inform decision-making and instruction 	<ul style="list-style-type: none"> - Early diagnostic assessments and ongoing formative assessment to inform instruction and critical reflection by all 	<ul style="list-style-type: none"> - As above
What more could the school, jurisdiction and government do?	<ul style="list-style-type: none"> - Better integration of community supports - Involve parents and better communication with parents to empower them to help their children - More/better resources to help parents and teachers follow through post-assessment - More differentiated instruction at the school level 	<ul style="list-style-type: none"> - <u>Schools</u> Provide more time for teachers/provide support Professional development Smaller classes Involve parents - <u>Jurisdictions</u> - More resources/funding - Professional development - Smaller classes - More time for teachers/support - More trained staff - More equitable funding -Full day Kindergarten - <u>Government</u> - More 	<ul style="list-style-type: none"> - <u>Government</u> -Provision of tools, programs and support for early intervention and diagnostic assessments - More emphasis on assessment for learning - Better coordination of programs or interventions - Tools to facilitate parental involvement 	<ul style="list-style-type: none"> - N/A

QUESTIONS	PARENTS	INDIVIDUAL STAKEHOLDERS	STAKEHOLDER ASSOCIATIONS	LITERATURE REVIEW
Key points	<ul style="list-style-type: none"> - Better communication to engage parents - Make resources or supports available - Differentiated instruction in the classroom is key - Steps to ensure more consistency between schools/teachers - Smaller classes 	resources/funding Smaller classes Downsize curriculum Continue AISI <ul style="list-style-type: none"> - Variety of strategies that differentiate to meet the needs of the learner - More resources (including human), and more funding - Formative and diagnostic assessments - More teachers support in the classroom - Provision for professional - More focus on numeracy and literacy - Communication with parents is vital 	<ul style="list-style-type: none"> - Early Intervention - Program of diagnostic assessments - Better communication with all involved - More teacher in-service and pre-service professional development (re: assessment expertise) - More focus on literacy and numeracy in early grades - Smaller classes - More funding generally 	<ul style="list-style-type: none"> - There is consensus in the literature that properly constructed and applied assessment tools provide data with the high degree of validity and reliability necessary to aid decision making and support students in acquiring literacy and numeracy skills.

Using this table as the guide, the overall responses to the questions distributed seem to be as follows:

1. In your view and experience, how do young children learn?

There is no “one best fit” that can be used as a template to match all student learning styles to student learning needs. However, there did seem to be agreement amongst all who provided input and in the literature reviewed, that attempts should be made to assess how individual children learn by employing a variety of methods or tools, then match instruction to the individual student’s learning needs.

2. In your view, what do you think are the most effective ways to ensure children are developing literacy (language skills) and numeracy (mathematics skills) in their early years at school?

- *Use a variety of methods (emphasis on diagnostic and formative classroom based assessments) to inform teaching, instruction and as an intervention*
- *Early intervention is vital*
- *Focus on the basic skills in the early years; curriculum to focus more on literacy and numeracy*
- *Better accessibility to resources and information for parents so that they can help their children and become more involved in the education process*

- 3. Describe what method you would use in order to know that what you are doing with a child is working. What would you be looking for? Once a child's learning has been assessed in some way, what can be done to help the child excel? (This question was divided into two separate questions for group discussions)**
- *Early diagnostic assessments and ongoing formative assessment to inform instruction and critical reflection by all*
 - *Support in the form of resources/funding to help assess and guide actions based on those assessments*
- 4. What more do you think the school, the school jurisdiction, and the government could do to assist all children's learning? How could you help the school?**
- *Government provision of tools, programs and support to teachers, schools, jurisdiction and parents for early intervention and diagnostic assessments*
 - *Better inter-agency coordination of programs and interventions/community supports*
 - *Tools to facilitate family/caregiver involvement*
 - *More differentiated instruction at the school level with emphasis on assessment for learning*
 - *Involve parents and better communication with parents to empower them to help their children*
 - *More time for teachers*
 - *Increase professional development/teacher training*
 - *Smaller classes*
- 5. Of all the things that have been considered, what do you feel is most important? What are the key ideas?**
- *Better program of diagnostic assessments and remediation are needed*
 - *A variety of formative and diagnostic assessments are needed to help inform instructional strategies and decision-making premised on appropriate user supports*
 - *Early intervention is key to success*
 - *Better communication with all involved (including parents)*
 - *More focus on numeracy and literacy in the early grades*
 - *More support, resources and funding generally, but specific also to teacher training and professional development and smaller classes*
 - *Better interagency co-ordination*

Recommendations

The following recommendations were prepared in response to feedback from focus groups and written submissions. They speak to the key themes that emerged from the consultation, and are designed to address the needs of the group of children not achieving the literacy and numeracy standards by Grade 3 to be successful throughout their schooling.

- 1. That Alberta Education, with education stakeholders, research, develop and communicate working definitions of numeracy and literacy related to Alberta Education's Programs of Study.**

Comment: In order to properly assess whether or not students are developing literacy and numeracy skills, clear and agreed upon definitions of numeracy and literacy are needed, recognizing the differences in early literacy and numeracy versus later literacy and numeracy. Although the responses from the various parent and stakeholder groups did not directly call for this recommendation, discussions with both the stakeholder advisory group and senior members of Alberta Education made it apparent that this was a necessary precursor for many of the following recommendations.

Strategy: Evaluate research in this area, and use that as the basis for informing this task.

- 2. That Alberta Education, with education stakeholders, develop and disseminate materials for teachers in defining and diagnosing developmental sequences linked to the Alberta Education curriculum, for Kindergarten to Grade 3.**

Comment: A system of provincial developmental sequences for Kindergarten to grade 3 numeracy and literacy would ensure better consistency across classrooms and jurisdictions, and would help support teachers in monitoring student outcomes for use in formative instruction. This supports ACOL recommendations 5, 6, 10, and 59, and relates to the key themes that emerged regarding a better program of diagnostic assessments to inform instruction, and more diagnostic/instructional resources in general.

Strategy: Use the outcomes in the programs of study to develop developmental sequences that define what students should know and be able to do across a range of performance standards, with suggestions for instructional practice and program development.

- 3. That Alberta Education identify and subsidize diagnostic resources for numeracy and literacy in Kindergarten to Grade 3 that would inform instructional practice and program development responsive to child and student learning needs.**

Comment: Identification/development and cost subsidies for a common set of diagnostic resources currently available would provide a focus for teacher professional development and application of diagnostic resources responsive to child and student learning needs in relationship to the Alberta Program of Studies. This again relates to the key themes that emerged regarding a better program of diagnostic assessments to inform instruction, and more diagnostic/instructional resources in general.

Strategy: Evaluate existing commercial and/or update provincially developed diagnostic resources to determine or improve their usefulness in assisting teachers.

- 4. That Alberta Education develop pilot projects to deliver professional development on recommended literacy and numeracy diagnostic resources and interpretation thereof to support instructional practice.**

Comment: Well designed and monitored pilot projects might help to determine the degree to which a range of professional development programs could enhance the skills of teachers. This supports ACOL recommendations 59, 60, 70, and 71 and supports the key theme that emerged in the consultation pertaining to a need for teacher training and professional development.

Strategy: The pilot projects should be designed to meet a range of teacher needs from beginning to experienced teachers and should include job-embedded mentorship models and/or internships.

- 5. That Alberta Education continue support for ACOL recommendation 1, to establish parenting centres in communities across the province with close links to elementary schools.**

Comment: In the consultation process the need to better involve and engage parents in their child's education, as well as the need for better interagency co-operation, were consistent themes. The establishment or support for existing center(s) would be an important step towards providing multiple inter-agency supports for learning at centralized service points. This recommendation is related to ACOL recommendations 1, 4, 13, 20, and 21, and addresses the themes of better inter-agency coordination, and improved communications with all involved.

Strategy: The Alberta Child and youth initiative is currently developing guidelines for Alberta Regional Integrated Case Management Teams, to better integrate and co-ordinate services for children, youth and families, and as such would be a valuable partner in this pilot.

- 6. That Alberta Education fund, for populations deemed to be at risk, pre-Kindergarten and full-day Kindergarten programs with a focus on early literacy, early numeracy and parent involvement, consistent with the Goals of Education.**

Comment: Because learning success in later life is so heavily influenced by factors prior to Grade 1 such as poverty, and because early detection of problems with early intervention can mitigate some of the factors that negatively impact a student's learning, it is vital that the opportunity to address problems be available before Grade 1. Partnering with Early Childhood Services to determine which children might be offered early interventions would be vital. The terms Kindergarten and Early Childhood Services are often used interchangeably. However, "Kindergarten" refers specifically to the education program for children in the year prior to Grade 1, and "Early Childhood Services" refers to the broad coordinated system of local and provincial programs that meet the developmental and special education needs of the whole child and their families. The Kindergarten program is an important part of Early Childhood Services. This is supportive of ACOL recommendations 2 and 3 and is under active consideration by the Alberta government, and relates to the key theme that early intervention is beneficial.

Strategy: Support the ongoing work of the Alberta Children and Youth Initiative in this area.

7. That Alberta Education extend AISI cycles from 3 to 4 years, with year 4 of each cycle being devoted to reviewing the results achieved in order to institutionalize and disseminate promising practices and to optimize planning for the next cycle.

Comment: By extending AISI project cycles by 1 year, applicants would have a chance to review results from successful projects, including identification of effective comprehensive assessment strategies linked to instruction, and use those results in planning their next projects. Funding for the fourth year would have to continue, but would be used differently. Feedback related to communicating best practices during the consultation suggested that this would help disseminate promising practices to jurisdictions and schools. Approximately 34% of AISI projects have targeted literacy, and 15% have targeted numeracy. This supports ACOL recommendations 13, 53 and 54 and has implications for the key theme that emerged regarding improved communications.

Strategy: Work with the School Improvement Branch to develop a more comprehensive systemic approach to evaluating individual projects, and synthesizing promising practices for dissemination back to jurisdictions and schools.

8. That Alberta Education identify strategies for improving communications with parents regarding their child's learning.

Comment: A common theme heard from parents was the need for better communications regarding their children's education and their children's progress. The role parents play in their children's education is vital and needs to be supported through ongoing dialogue with the children's schools. On a broader scale, improved dialogue with parents should be expanded to include better communications with the general public on progress achieved in the area of literacy and numeracy achievement. This supports ACOL recommendation 1 and is directly related to the need for better communications that was voiced in the consultation.

Strategy: Research the communications needs of parents and teachers to determine if there are resources that could be used to fill-in any communication gaps.

Appendix 1 – Stakeholder Advisory Committee

STAKEHOLDER ADVISORY COMMITTEE EARLY LITERACY AND NUMERACY CONSULTATION INITIATIVE

Learner Assessment Branch, Alberta Education

Mr. Greg Bass, Associate Superintendent, Buffalo Trail School Division

Dr. John Burger, Senior Manager, System Improvement Group, Alberta Education

Dr. J-C Couture, Executive Assistant, Alberta Teachers' Association

Mr. Scott Finnerty, Community Development Officer, Community Development Facilitator

Mr. Wayne Hampton, Principal, Lacombe Upper Elementary School

Ms. Pat Hauck, Alberta Children and Youth Initiative, Alberta Education

Ms. Marilyn Hrycauk, Director of Instruction, Northern Lights School Division, College of Alberta School Superintendents

Ms. Tracy Kaley, Alberta Home and School Councils' Association

Dr. Alyce Oosterhuis, Special Programs Coordinator, Association of Independent Schools and Colleges in Alberta

Mr. John McDermot, Director, Program Outcome Integration, Children's Services

Ms. Sandra Skare, Education Manager, Aboriginal Services, Alberta Education

Mr. Keith Wagner, Alberta School Boards Association

Ms. Michele Samuel, Director, Achievement Testing Program, Learner Assessment

Mr. Dennis Belyk, Executive Director, Learner Assessment

Ms. Nadia Hochachka, Special Assistant, Learner Assessment

Appendix 2 – Backgrounder and Consultation Questions



K-3 LITERACY AND NUMERACY CONSULTATION INITIATIVE

2005/2006

BACKGROUNDER

Alberta's K-12 education system is world class. Yet despite our best efforts, a significant number of students are not experiencing success as indicated by school-based and large-scale assessments. We invite you to participate in a consultation process to help identify how student learning in the areas of reading, writing, and mathematics in early years can be improved. The consultation includes a number of components.

Phases of the K-3 Literacy and Numeracy Consultation Process

This consultation focuses on a number of discussion questions, which are provided at the end of this document. The consultation process is being guided by a stakeholder advisory committee and includes the sharing of information about the consultation with key stakeholder groups, and posting of the information on Alberta Education's web site for individual and/or group response. It also includes meetings with groups of parents in centres across the province (Grande Prairie, Edmonton, Red Deer, Calgary and Lethbridge) and with parents of First Nation and Métis children. The parent meetings will be conducted by facilitators from Alberta Community Development.

The consultation will be supported by a research analysis by Alberta Education staff members. As well, a review and analysis of findings from the meetings, submissions, and research will be done by Alberta Education, followed by the preparation of a draft report summarizing the findings. The Stakeholder Advisory Committee will review the draft report and develop recommendations for submission, along with the summary report, to Alberta Education's Executive Team by February 2006.

Literacy and Numeracy

For the purposes of this consultation and to assist in focusing discussion, the following definitions and background information are provided.

	<i>Definition</i>
<i>Literacy</i>	<ul style="list-style-type: none">• Literacy is the ability to read and write.• Studies in language arts are intended to encourage, in students, an understanding and appreciation of the importance and beauty of literature. A second aim is to enable each student to understand and appreciate language and use it confidently in a variety of situations for communication, personal satisfaction and learning.
<i>Numeracy</i>	<ul style="list-style-type: none">• Numeracy is the ability to solve mathematical problems including the ability to add, subtract, multiply, and divide.• Studies in mathematics are designed to help students to use mathematics confidently to solve problems, to communicate and reason mathematically, and to value mathematics.
<i>Instruction</i>	<ul style="list-style-type: none">• Instruction refers to school-based activities systematically designed to help children with their learning and to encourage their interest in it. A variety of out-of-school activities can support and reinforce children’s learning, e.g., regular reading and discussion in the home.• Effective classroom instruction includes assessment to facilitate students’ learning and to determine the quality of teaching and learning.

Alberta's Kindergarten to Grade 3 curriculum: The curriculum is outlined in Programs of Study that identify what students are expected to know and be able to do in each subject and grade. The Programs of Study provide the framework for the planning of instructional programs. Students’ learning is facilitated by providing opportunities to learn and by assessing what has been learned in relation to the Programs of Study.

Classroom and Large-scale Assessments

Classroom assessments: In the classroom from day to day, a teacher constantly observes children and gathers information about their learning. While this type of informal classroom assessment helps the teacher to direct the classroom activities, the teacher also assesses students' progress systematically in relation to specific curriculum goals. This more formal type of assessment helps the teacher to plan an instructional program that reflects the grade level curriculum and is appropriate for the children in that particular class. An effective instructional program includes diagnostic, formative, and summative assessments, which have different but complementary purposes, as shown below.

	<i>Definition</i>
<i>Diagnostic Assessment</i>	<ul style="list-style-type: none">• a means of gathering information about a student's learning traits and characteristics, for use in planning a specific instructional strategy. <p><i>Example:</i> Assessment of the child's reading may reveal that the child confuses the sounds that correspond to specific letters, or that the child lacks the understanding of many common words; analysis of the student's writing may reveal similar difficulties, reflected in spelling errors and misuse of words.</p>
<i>Formative Assessment</i>	<ul style="list-style-type: none">• procedures used to gather information about students' learning throughout the school year, in order to inform instruction. <p><i>Example:</i> Oral questions during a lesson; a quiz at the end of a short unit of work; a written assignment marked in class or by the teacher.</p>
<i>Summative Assessment</i>	<ul style="list-style-type: none">• a means of determining how well a student has achieved the expected grade-level outcomes at the end of a grade, unit, or reporting period. <p><i>Example:</i> A project report; a final class test; a provincial achievement test</p>

Alberta’s achievement tests: Provincial achievement tests are administered annually in grades 3, 6, and 9. The grade 3 tests assess students’ learning in relation to the curriculum in mathematics and language arts (reading and writing).

The content of each achievement test is derived directly from the program of studies for a given grade, and the standard for student performance reflects what teachers believe is an appropriate demonstration that a student has learned what is expected in that program of studies. The tests serve as one measure of the extent to which children across the province have achieved the curriculum standards by the end of grade 3. As a large-scale assessment, the provincial achievement tests provide important information to teachers and the educational system about student learning.

Student results on achievement tests are reported in relation to two standards, the acceptable standard and the standard of excellence.

	<i>Definition</i>
<i>Acceptable Standard</i>	<ul style="list-style-type: none">• A student achieving the acceptable standard demonstrates basic knowledge and skills reflecting the core learnings in the curriculum measured by the test.
<i>Standard of Excellence</i>	<ul style="list-style-type: none">• A student achieving the standard of excellence demonstrates a mastery of the knowledge and skills reflecting the core learnings in the curriculum measured by the test.

* * * * *

All of these assessments, whether formal or informal, whether individual or classroom-based or province-wide, are intended to provide useful information to teachers, school administrators, and government for use in support of teaching and learning.

K-3 Literacy and Numeracy Consultation Framework

Discussion Questions

Our goal in schooling is to help children meet their individual potential and create a positive future for themselves, their families and their communities.

1. In your view and experience, how do young children learn?
2. In your view, what do you think are the most effective ways to ensure children are developing literacy (language skills) and numeracy (mathematics skills) in their early years at school?
3. Describe what method you would use in order to know that what you are doing with a child is working. What would you be looking for? Once a child's learning has been assessed in some way, what can be done to help the child excel?
4. What more do you think the school, the school jurisdiction, and the government could do to assist all children's learning? How could you help the school?
5. Of all the things that have been considered, what do you feel is most important? What are the key ideas?

We look forward to receiving your input, by November 30, 2005, to

*Executive Director, Learner Assessment
Alberta Education
44 Capital Boulevard, 10044 – 108 Street
Edmonton, Alberta
T5J 5E6*

[Thank you for participating in this important consultation initiative.](#)

Appendix 3 – Parent Responses from Consultation Meetings

	Frequency	
	Number	Percentage
Exposure/Modeling	26	20.3%
Variety	23	18.0%
Repetition/Routine	14	10.9%
Hands on	9	7.0%
Hypothesis Testing	8	6.3%
Healthy Safe Environment	7	5.5%
Interest/Internalization	7	5.5%
Positive Reinforcement	5	3.9%
Play	5	3.9%
Experience	3	2.3%
Involve Parents in Formative Assessment/communication	3	2.3%
Challenge/competition	3	2.3%
Sequential	3	2.3%
Gender Differences	2	1.6%
Comment	2	1.6%
Memorizing	2	1.6%
Song	1	0.8%
Concepts and Patterns	1	0.8%
Clear expectations	1	0.8%
One on One Support	1	0.8%
Confidence of the education (contagious, aha moments)	1	0.8%
Negative Reinforcement	1	0.8%
Total	128	1

Most effective ways to ensure kids are learning numeracy and literacy?

		Frequency	
Valid	Involve Parents in Formative Assessment/communication	34	15.8%
	More/Better Resources	32	14.9%
	Differentiated instruction	21	9.8%
	Smaller Classes	15	7.0%
	Make it Fun/Relevant	12	5.6%
	Safe/Healthy environment	11	5.1%
	Comment	13	6.0%
	Better Integration of resources	10	4.7%
	Focus on Basics	10	4.7%
	Positive Reinforcement	8	3.7%
	Repetition/Consistency	6	2.8%
	Readiness to Learn	6	2.8%
	Good Teachers	6	2.8%
	Exposure/Role modeling	6	2.8%
	Hands on Learning	6	2.8%
	Early Assessments/Intervention Pre-Kindergarten	5	2.3%
	Constructivist Approach	4	1.9%
	Integrate into other subjects	3	1.4%
	Sequential	2	0.9%
	Formative Assessments	1	0.5%
	Variety of methods	1	0.5%
	Testing	1	0.5%
	Student Centered Assessment for Learning	1	0.5%
	Challenge/Competition	1	0.5%
	Total	215	100.0%

Most effective way to ensure kids are learning literacy?

		Frequency	
Valid	Focus on Basics	9	13.8%
	Exposure/Modeling	9	13.8%
	Involve Parents in Formative Assessment/communication	7	10.8%
	Early Assessment/Intervention	6	9.2%
	Formative Assessments	4	6.2%
	Better Use of Libraries/Librarians	3	4.6%
	Differentiated Instruction	2	3.1%
	Comment	2	3.1%
	Specific Resource	2	3.1%
	Take home Resources	2	3.1%
	Phonics	2	3.1%
	Positive Reinforcement	2	3.1%
	Volunteer readers	1	1.5%
	Challenge them	1	1.5%
	Books on Tape	1	1.5%
	Computers	1	1.5%
	Reduce Relative Age Effects	1	1.5%
	Age Appropriate Resources	1	1.5%
	Better Distribution of Resources	1	1.5%
	More teacher Aids	1	1.5%
	Identify Barriers	1	1.5%
	Phonemics	1	1.5%
	Consistency	1	1.5%
	TV Captions	1	1.5%
	Sight Words	1	1.5%
	Make it Fun/Relevant	1	1.5%
	Self-Directed	1	1.5%
	Total	65	

Most effective way to ensure kids are learning numeracy?

		Frequency	
Valid	Hands on/Manipulatives/Concrete Examples	20	29.4%
	Focus on basic skill Development	6	8.8%
	Repetition	6	8.8%
	No Calculators/Computers	4	5.9%
	Involve Parents in Formative Assessment/communication	3	4.4%
	Better Math Teachers	3	4.4%
	Positive Reinforcement	2	2.9%
	Comment	2	2.9%
	Crafts	2	2.9%
	Make it Fun/Relevant	2	2.9%
	Music	2	2.9%
	Take home Resources	2	2.9%
	Early Assessment/Intervention	1	1.5%
	Repetition	1	1.5%
	Use Calculators	1	1.5%
	Formative Assessment	1	1.5%
	Songs	1	1.5%
	Differentiated Instruction	1	1.5%
	Ensure Literacy is strong	1	1.5%
	Computer Math Programs	1	1.5%
	Better Math Resources	1	1.5%
	Shows Patterns	1	1.5%
	Age Appropriate	1	1.5%
	Sequential	1	1.5%
	Focus on basic skill Development	1	1.5%
	Differentiated Instruction	1	1.5%
	Total	68	

What method would you use in order to know what your child is learning?

Comment	29	23.0%
Teacher Observation	12	9.5%
Variety of Assessments	11	8.7%
Involve Parents in Formative Assessment/communication	10	7.9%
Formative Assessment	8	6.3%
Ask Child	6	4.8%
Rubrics/Clear Expectations	6	4.8%
Early Testing	3	2.4%
Use Assessment Experts	3	2.4%
Written Test	3	2.4%
Criterion referenced testing	3	2.4%
Follow-up assessments	3	2.4%
Early Assessment	3	2.4%
Assess Progress/Performance	3	2.4%
Norm referenced classroom testing	2	1.6%
Application	2	1.6%
Oral Testing	2	1.6%
Student Led Conferencing	2	1.6%
Diagnostic Assessment	1	0.8%
Summative Assessment	1	0.8%
Test	1	0.8%
Ask Parents	1	0.8%
Regular Testing	1	0.8%
Challenge Beyond the Level	1	0.8%
Assess Progress	1	0.8%
Inquiry Based Learning	1	0.8%
Check for internalization	1	0.8%
Check Homework/Talk about homework	1	0.8%
Classroom Testing	1	0.8%
Check Application of knowledge	1	0.8%
Check Internalization	1	0.8%
Integrate with other subjects	1	0.8%
Mastery Learning	1	0.8%
Total	126	

Once the student is assessed, then what?		Frequency	
Valid	Make resources/Support available	17	22.1%
	Comment	16	20.8%
	Course of follow-up action	14	18.2%
	Involve/Educate Parents in Options	11	14.3%
	Confirm	5	6.5%
	Mentoring	4	5.2%
	Match levels with other students	3	3.9%
	Integration with other (community) resources	3	3.9%
	Differentiated Instruction	2	2.6%
	Do not Promote	1	1.3%
	Promotion	1	1.3%
	Total	77	

Comments

1 ALL SCHOOLS GET EQUAL FUNDING
2 TRAINED TEACHERS FOR PORTIONS OF PSYCHIATRIC
3 TESTING SPEEDS UP TESTING AND DIAGNOSIS
4 COMPENSATE PARENTS FOR GETTING HELP ON THEIR
5 OWN
6 REVIEW CODING SYSTEM AND THE FUNDING
7 ATTACHED WE NEED TO BE ABLE TO HELP KIDS
8 WITHOUT THE RED TAPE THE SYSTEM INHIBITS
9 EFFECTIVE HELP TO THE CHILD 'CODING' IS
10 REDUCING ACCESS TO SUPPORT
11 CODING IS FOCUSED ON BAD BEHAVIOR AND MISSING
12 THE LEARNING NEEDS OF OTHER KIDS
13 INVESTIGATE WHETHER INTEGRATION IS WORKING
14 GATE PROGRAMS YOU SHOULD BE ABLE TO OPT OUT
15 DON'T JUST LEAVE THE AVERAGE STUDENTS RAISE
16 THE BAR FOR EVERYONE CONTINUE TO CHALLENGE
ALL STUDENTS
17 INFRASTRUCTURE REPAIR AND UPDATE EXISTING
18 BUILDING WE NEED BUSING
19 ASSESSMENT OF THE WHOLE CHILD HOW DO THEY
20 SOCIALIZE WHAT'S THE HOME ENVIRONMENT
21 WHAT IS THE END PLACE FOR THESE KIDS 'GIFTED'
22 OR 'STRUGGLING'
23 THE SOLUTION FOR GIFTED IS NOT JUST MORE WORK
24 CREATE CONSTRUCTIVE OPPORTUNITIES OTHER THAN
25 PUSHING THEM UP A GRADE
26 USE SOME OF THE SUCCESSES WITH HOME
27 SCHOOLING HOME SCHOOLED KIDS DON'T SIT FOR
28 HOURS A DAY
29 TEACHERS ARE OVERWHELMED
30 RESERVE SCHOOLS ARE UNDER-FUNDED DON'T HAVE
31 THE MONEY FOR SPECIAL NEEDS EITHER GIFTED OR
32 BEHIND
33 FEDERAL AND PROVINCIAL GOVERNMENT NEED TO
34 COORDINATE THEIR FUNDING SO THE RESERVE
35 SCHOOLS AREN'T LEFT BEHIND

What more can schools, jurisdictions, government and parents do?

		Frequency	
Valid	Involve Parents/Communicate with Parents	15	22.4%
	More Resources/Funding	15	22.4%
	Involve Community	4	6.0%
	More Acknowledgement of Differentiated Learning Styles	4	6.0%
	Comment	4	6.0%
	Smaller Classes	4	6.0%
	Transparent/Accountable Funding	3	4.5%
	Better Access to resources	2	3.0%
	More Local Decision-making over funding	2	3.0%
	More Student Centered	2	3.0%
	More Equitable Funding	1	1.5%
	More School Choice	1	1.5%
	Less Stress for Teacher	1	1.5%
	Early Literacy	1	1.5%
	Career Days	1	1.5%
	After School Programs	1	1.5%
	Lesson Learned from Others	1	1.5%
	More Teachers	1	1.5%
	More Cultural Awareness	1	1.5%
	No Library fees	1	1.5%
	Universal full day Kindergarten	1	1.5%
	French LA PAT in Grade 3	1	1.5%
	Total	67	

Key points		Frequency	
Valid	Involve Parents/Communicate with Parents	16	17.6%
	More Support/Resources	14	15.4%
	Differentiated Instruction	9	9.9%
	More Comparability between schools/Teachers	8	8.8%
	Smaller Classes	6	6.6%
	Focus on the Basics	4	4.4%
	Early Assessment/Intervention	4	4.4%
	Comment	3	3.3%
	Fund/Implement the support	3	3.3%
	Mentoring/Peer Learning	3	3.3%
	Pre-Kindergarten	3	3.3%
	Variety of Assessment	3	3.3%
	Better Integration of Resources	2	2.2%
	More Instructional Hours	2	2.2%
	Consistency	2	2.2%
	Constructivism	1	1.1%
	Student centered learning	1	1.1%
	Make it Fun	1	1.1%
	Integration of Subjects	1	1.1%
	Full day Kindergarten	1	1.1%
	No grade 3 test	1	1.1%
	Positive Reinforcement	1	1.1%
	Mastery Learning	1	1.1%
	Review Coding	1	1.1%
	Total	91	

Appendix 4 – Individual Stakeholder Responses

How do young children learn?

	FREQUENCY	Code 2
Hands on Experimentation/Exploration	16	1
Repetition/Routine/Practice/ Consistency	15	1
Hands on	12	1
Modeling/Emulation/Observation	11	1
Healthy Safe Environment / Environment that encourages learning	10	2
Multi-sensory experiences/instruction	10	1
Interest/Internalization/Involvement/Relevant/ Meaningful	9	1,2
Involve Parents/Communicate with Parents	7	3
Express own ideas/tell what they know/reflect on what they know/self assess	7	4
Play/Fun	7	2,1
Real World Application/Draw connections to outside world	7	1
Sequential/Building on what they know	7	1
Use individual learning preferences/approach same topic in different ways	6	1
Group work/Peer support/Cooperative learning	6	1
Teacher as facilitator/Guided instruction	6	1
Age/level/developmentally appropriate instruction	5	1
Confidence of the education (contagious, aha moments, confidence)	4	2
Allowing choices	2	1
Challenge	2	1,2
Instruction	2	1
One on One Support	2	1
Read to children	2	1
Seeing patterns	2	1
Integrate topics/subjects	1	1
Provide help to parents who need it	1	1
Bloom's Taxonomy	1	1
Clear explanations	1	1
Curriculum additions make it difficult to explore and review concepts	1	5
Do research on this topic instead of asking for opinions	1	5
Memorization	1	5
Mix of traditional and nontraditional techniques	1	1
Music	1	1

Project-based teaching	1	1
Reinforcement	1	1
Representing in a variety of ways	1	1
Self regulation	1	5
Single grade classes	1	5
Technology	1	1
There are outside factors that influence learning	1	5
Use authentic assessment	1	4
Smaller classes	1	5
Average	6.481481481	
	n=27	

(1)Methodology/Strategy	139
(2)Affective	32
(3)Invovle Parents	7
(4)Assess	8
(5)Other	7

Most effective ways to ensure kids are learning numeracy and literacy?

	FREQUENCY	Code
		2
Use assessment results to inform teaching/provide appropriate instruction/intervention to help children reach their level of ability	55	4
Hands on activities/manipulatives	211	1
Involve Parents/Communicate with parents	43	5
Exposure (to texts/numbers)/Being read to	42	1
Variety of approaches to learning/different learning styles	141	1
Pre and Post Assessment/Follow-up assessments/Growth	61	4
Continuity of instruction/teach over long periods of time	20	1
Good Teaching Practices/Knowledgeable teachers/Teachers trained in early literacy/numeracy	20	1
Group work/collaborate with peers	23	1
Make it meaningful/engaging	20	1
One on one time with the teacher	22	1
Oral assessment/talk with children/discussions	19	1
Have students share what they	23	1

know/share their work		
Teacher Observation/Monitoring	25	4
Emphasize literacy or numeracy/literature/number rich environment	21	3
Guided reading/writing/having students read/write	19	1
Teach at child's level/materials at child's level	19	1
Variety of Assessments (Specific Tests Named)	24	4
Formative Assessments	18	4
Identify areas of strength/weakness/areas of knowledge	22	4
Ongoing assessment	22	4
Practice	17	1
Repetition/Consistency/Reinforcement	17	1
Smaller Classes	17	5
Use real life/practical applications	14	1
Use Assessment Experts	22	4
Analyze PATs	19	4
Student self assessment	19	4
Rubrics/Clear Expectations	19	4
Appropriate assessment/variety of assessments	16	4
Classroom assessments/performance on class work	16	4
Modeling	12	1
Phonics	8	1
Play/Games	12	1
Recognize patterns/relationships	11	1
Standardized assessment	15	4
Build on previous knowledge	7	1
Diagnostic Assessment	13	4
Early Assessments/Intervention Pre-Kindergarten	11	4
Gradually increase difficulty/challenge	10	1
Integrate into other topics/areas/tasks	9	1
More time for math and language arts/Downsize curricular content	14	5
Problem solving	9	1
Professional growth/PLCs/Professional Development	11	5
Running record	8	1
Whole language	8	1
Adequate funding	8	2
AISI Projects	11	5
Anecdotal assessment	10	4
Appropriate learning space/environment	9	3
Balanced Literacy	7	1

Collaborative approach	4	1
Have children participate in their own learning/reflect on what they know	7	1
Junior Kindergarten	10	5
Music	7	1
Portfolios	10	4
Provide resources to parents who need them	7	2
Readiness to Learn/Entry age to Kindergarten	7	3
Reading Recovery	3	1
Summative Assessment	10	4
Teacher guided lessons	7	1
Exploration and experimentation	7	1
Do research on this topic rather than asking for opinions	8	5
Adaptive technology	1	1
Foster fluency	3	1
Give teachers more specific information about provincial assessment	7	4
Inquiry	4	1
Integrated school library/classroom library	3	3
Learn to "play" with sounds	4	1
Look for consistency amongst assessment results	7	4
Memorization	3	1
Multisensory methods	4	1
Need a good diagnostic math program	7	4
Parent volunteers	5	2
Provide feedback to students	7	4
Reading and writing folders	3	1
Reading Inventories	4	4
Revisit curricular areas	1.00	1
School-designed tests	7	4
No more than two grades per class	5	5
Student classroom behaviour	6	3
Technology (computers, calculators)	4	1
Testing	7	4
Use Learning to Read and Write: Developmentally Appropriate Practices for Young Children	4	1
Utilize Program of Studies	4	1
Observe soft skills	7	4
Average	6.768139662	

(1) Methodology 173
(2) 5
Resources/Funding

(3) Affective	12
(4) Assessment	111
(5)Other	27

Describe what method you would use in order to know that what you are doing with a child is working.

	FREQUENCY	CODE		
		2		
Chart individual progress/evaluate tests for growth/know child's baseline/pre/post testing	242	2	4	
Plan programming based on assessment/approach learning from different modalities	431	2	4	
Observe students	145	1	4	
Variety of assessments (either listed tests or stated that a variety of assessments were used)/proper assessment	353	1	2	3
Performance on tasks/assignments	148	2	5	
Oral questioning/Listen to students/Let child explain what he/she has learned	195	2	4	
Changes in student behaviour/attitudes / Ask child how he/she is doing	30	2	4	
Ongoing assessment/assessment throughout the year	24	2		
Anecdotal assessments	30	2	4	
Diagnostic Assessments	28	1	4	
Testing (comprehension, criterion-referenced, standardized)	24	3	5	
Checklists	24	1	2	5
Create a challenging environment/enrichment	21	5		
Rubrics	24	2	5	
Portfolios	19	1	4	
Need More/Better Resources/Funding	20	2	1	3
One on one assessment	17	6		
Application of knowledge	15	6		
Formative Assessments	13	2		
IPPs	17	1	4	
Involve Parents in Formative Assessment/communication	11	2		
Set goals/targets/modify goals or targets	13	4		
Standardized assessments	14	3		
Summative assessments	13	3		

Support from other staff for teachers/classroom assistance/more time for teachers	17	6		
Use assessment experts	13	6		
Determine weaknesses and abilities	11	4		
Group work/peer coaching	8	2		
Look for comprehension/knowledge of concepts	8	2		
Positive reinforcement/environment/confidence	11	6		
Teacher/school created assessments	14	1	2	3
Revise the Alberta Diagnostic tests	6	1		
Grade level standards	11	6		
Look for fluency in math and language	9	6		
Look for independence	9	4		
Student self evaluation	9	1	2	
Problem solving	10	6		
Professional Development/Professional Learning Communities	11	6		
Smaller Classes	11	6		
Teacher knowledge	12	6		
Reading inventories	10	2	4	
Consistency/Practice	8	6		
Look at aspects of written work (vocabulary, sentence structure)	9	6		
Look for mastery/development of mastery	8	6		
Look for physical health	9	6		
Look for speech skills	8	6		
Reading Recovery	9	6		
Running records	9	2	4	
Ways to think/how to learn	9	6		
Early assessment/intervention	8	6		
Ability to complete number operations	7	6		
Allow child to make choices	8	6		
Assessment using curriculum based instruction	7	6		
Capstone projects	8	6		
Direct assessment in grades 2, 5, & 8	7	6		
Emulation	7	6		
Fund curriculum rather than assessment	7	6		
Hands on Learning	8	6		
Interaction	8	6		
Look at child in relation to what is developmentally appropriate for age/stage	7	1	4	
Look for accuracy	5	4		
Look for connections	7	6		
Look for emotional and behavioural readiness	7	6		

Look for fine motor and large motor skills	6	1	4
Look for reading readiness	6	1	4
Make it Fun/Relevant	8	6	
Modified assessment for students who receive remedial instruction	7	1	4
Rating scales	4	3	
Repetition/Consistency/Routine	7	6	
Role playing	7	6	
There is not enough time to help children excel beyond learner outcomes	8	6	
Visible learning	8	6	
Word attack skills	7	6	
Test a sample of student population	4	3	
Guided reading	8	6	
Balanced Literacy	8	6	
AISI Projects	8	6	
Put money into remediation instead of curriculum	8	6	
Give time for analysis of tests/release tests for analysis	4	3	
Average	7.327284105		
	n=47		

- (1) Diagnostic 95**
- (2) Formative 196**
- (3) Summative 55**
- (4) Individual 157**
- (5) Classroom 57**
- (6) Other 83**

What more can schools, jurisdictions, government and parents do?

FREQUENCY

Professional Development for teachers/appropriately trained teachers (including working with post-secondary institutions)	18	1	2
Give teachers more time/support (ex: teacher assistants/resources room teachers)	16	2	
Smaller Classes/Fund CSI	15	2	3
Involve Parents/Communicate with Parents	11	1	2

Properly trained staff/more trained staff	10	2	
More special needs support	10	1	
More/Better Resources (ex: "human and material resources," curriculum resources, programs, "address deficiencies with resources")	9	3	
More Funding (ex: for PUF, for SHIP, for a public awareness campaign on literacy, for libraries, for materials, for an extended CSI, for new programs, lunch programs, after school programs, school supplies)	8	3	
Downsize curriculum content/Encourage Mastery Learning	7	3	
Early Intervention/Assessment	6	3	
Improved assessment materials	6		
Provide help for parents	6		
Continue AISI/AISI Funding	5	3	
Focus on/fund Early Childhood Development / Early numeracy/literacy	5		
Integrate services within schools/work as a team	5	2	
PATs do not give a full picture/children may not perform due to nervousness or age	5	3	
More time (minutes) for literacy and numeracy in early grades/in general	5	1	2
Report progress, growth, and development/test on growth	5	1	
Cancelling Grade 4 PATs was good/a grade 4 PAT is not a good idea	4	3	
Full Day Kindergarten	4	2	3
Involve Community/Community services/experts/fund community supports	4	1	2
Research and use of best practices	4	1	
Data driven analysis/use results to improve student learning	4	1	2
Comment	3	6	
Communication between schools/school council/jurisdiction/government	3	1	2
Differentiated learning styles	3	1	
Engaged learning time / Fun/interesting learning	3	1	
Teach age/level appropriate	3	1	
Challenge students/enrichment	2	1	
Continuity between grade levels/continue support for longer	2	1	

periods of time

Eliminate grade 3 PATs once GLA is in place/eliminate grade 3 PATs	2	3	
Integrate subjects	2	1	
Leadership	2	2	3
Monitor schools/classes/visit schools or classes	2	2	3
More Teachers	2	2	3
Positive/healthy environment	2	1	
Rubrics/portfolios/exemplars	2	1	
Space for learning/buildings/gym space	2	2	3
High expectations	2	1	
Set province-mandated date for beginning Kindergarten	2	3	
Mandate Kindergarten	2	3	
Do all restructuring based on educational rather than economic considerations/do not place education in a business model	1	2	3
CSI for grades 4 to 6	1	6	
Do not compare school/division results to outside groups	1	3	
Either have schools work with students or direct them to change population performance, not both	1	1	2
Encourage consistency on students excluded from PATs	1	1	2
Focus on how to learn	1	1	
Focus on strengths	1	1	
Focus on student thinking	1	1	
Have students be accountable	1	1	2
Improved reading resources	1	2	
Keep music in curriculum	1	3	
Keep standards high, but attainable	1	1	
One class per grade	1	2	
Pay teachers well	1	2	3
Preschool	1	2	3
Promote healthy families	1	1	2
Provide coordinator to ensure schools are meeting CSI standards	1	2	3
Release Primary Project information	1	3	
Standardized testing takes a lot of time	1	2	3
Trust teachers/keep morale high	1	2	
Understand developmental variation	1	1	
Materials at grade level	1	1	
Do not support the testing planned for GLA	1	6	
Involve teachers in the decision making process	1	6	

Tests require an array of skills (ex: math tests require reading skills)	1	6
Do "leg work" for schools	1	6
Provide workshops	1	6
Average	5.714285714	
	n=42	

(1) School 95

(2) Jurisdictions 115

(3) Government 98

(6) Comment 9

What are the key ideas?

FREQUENCY

More time for teachers/staff	13
Smaller Classes	12
Involve Parents/Communicate with Parents	10
Differentiated Instruction / Recognize different learning styles	10
More/Better Resources (ex: curriculum supports)	11
Appropriate assessment/variety of assessments	8
Focus on the Basics/limit curriculum	8
More/Better Funding	8
Properly trained teachers/staff	8
More resources/funding for special needs	8
Professional Development for teachers/Professional Learning Communities	8
More/Better Support (ex: teacher's aides, more teachers, specialists)	7
Support for parents who need it	7
Support for/from counselors/special needs teachers/other community support	5
Understand differential development	5
Continue AISI funding	4
Increase instructional hours for math and language arts/greater focus on literacy and numeracy	4
Integration of Subjects/Topics	3
Intervention	4
Testing is not necessarily a measure of a student's abilities/a single exam cannot yield a complete picture/tests may show things such as endurance	4
Collaboration between stakeholders (schools, etc.) and government	3
Consider students' backgrounds/cultural & economic differences	3
Consistency	3
Early Assessment/Intervention	3

Proper environment	3
Reasonable range of expectations/make plans to improve	3
Continue funding PUF/More funding for PUF	3
Additional support for non-coded students	2
Build on what children know	2
Comment	2
Continue ELI funding	2
Examine other countries'/schools'/jurisdictions' best practices/identify best practices before considering projects	2
Exposure to concepts/materials	2
Happy teachers/staff	2
Make it challenging	2
Mastery Learning	2
Model healthy living/assist with proper nutrition	2
Practice	2
Single grade per class	2
Student readiness/Set entrance age	2
Support for new Canadians/students with ESL	2
Teacher based assessment is the best	2
Too much paperwork/accountability	2
Identify and standardize measures for literacy and numeracy/identify the standard	2
Assess only literacy and numeracy in the primary grades	1
Confidence building	1
Daily assessment	1
Decide if goal is to have each student achieve his/her potential or to raise performance of the population	1
Discipline and respect	1
Do not move toward a "Back to Basics" philosophy	1
Emulation	1
Experiences	1
Focus on process rather than content	1
French resources/tests	1
Full day Kindergarten	1
Fund Kindergarten for home schooling	1
Districts track and assess remedial grade 4 students locally	1
How Alberta students rank internationally	1
Individual help for students	1
Keep children involved in their own education	1
Motion	1
Music	1
Phonics instruction	1
Positive Reinforcement	1
Pre and post testing	1
Question relationship between norm referenced tests and literacy/numeracy	1
Reading to children	1
Repetition	1
Stop having special needs students write PATs	1
Student centered learning	0

Support teachers' expectations	1
Teach soft skills (social skills, values)	1
Teacher salaries	1
Universal junior Kindergarten/Preschools	1
Flexible scheduling	1
Programs meeting the needs of remedial students are already in place	1
More funding for K-3	1
Determine whether instruction or the curriculum/test form is "at fault"	1
There is no need for another layer of provincial assessment	1
Average	4.91666667
	n=48