Final Report

Aboriginal Head Start
Making A Difference
in the Northwest Territories

Aboriginal Head Start

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in the Northwest Territories

Longitudinal Evaluation of
Aboriginal Head Start
in the Northwest Territories:
2000 to 2008
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Dr. Jennifer Chalmers

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The views presented in this report are solely those of the authors and editors and do not necessarily represent the views of the Public Health Agency of Canada or the participating First Nations communities.
Forward

This report provides a written record in the Northwest Territories (NWT) of the experience of program evaluation with Aboriginal Head Start, one of Canada’s early childhood intervention programs specifically targeted for Aboriginal children living in remote and urban communities.

The chapters that follow show the early development of a model of program evaluation that was based on the respectful partnerships of NWT Aboriginal Head Start educators, program managers, evaluators, funding agencies and NWTAHS communities. The successes in the works described in this report are based on a common belief of caring, collaboration and seeking guidance to support Aboriginal children, families and communities. Success is looked at in this work not by exemplary findings but in strong partnerships and shared wisdom in strengthening the Aboriginal Head Start program.

This final report includes historical information about the Aboriginal Head Start program, the roots of the program, the development of the model of program evaluation and lastly, the presentation of the 2008 longitudinal evaluation study and linkages to curriculum development. The chapters of this report are outlined below.

Executive Summary

The Executive Summary includes the highlights of the full report.

Chapter 1  Overview of the AHSUNC Program includes background information of the AHSUNC program in Canada and the NWT, as well as information from the US Head Start Program.

Chapter 2  NWTAHS Program Evaluation Development includes the steps taken, process, planning and decisions made by the Western Arctic Aboriginal Head Start Council to begin a participatory process in evaluating the Aboriginal Head Start program in the NWT from 1998 through 2004.

Chapter 3  NWTAHS Model of Program Evaluation includes the continuation of the work by WAAHSC to strengthen the model of program evaluation through follow-up with AHSUNC graduates and review of the literature, reviews of the model of program evaluation and sharing and learning with interested groups across North America.
Chapter 4  NWTAHS Longitudinal Evaluation - Methodology
includes details of the approach, sampling, data collection, timelines and ethical considerations for the 2008 Longitudinal Evaluation of AHSUNC.

Chapter 5  NWTAHS Longitudinal Evaluation - Findings and Discussion provides the findings from the 2008 Longitudinal Evaluation. A discussion follows including suggestions for future learning, program enhancements and how these findings compare to similar works in North America.

Chapter 6  Using Evaluation Findings in Curriculum Development includes a brief discussion of the Western Arctic Aboriginal Head Start Council’s use of the evaluation findings in the development of an NWT Curriculum for Aboriginal Head Start, which has just begun.

Chapter 7  What is Next includes a discussion of areas for future evaluation study, training with NWTAHS program staff and how to support the continued advancement of an evaluation agenda for Aboriginal communities and Aboriginal Head Start programs.

Appendix  List of Terms, History of NWTAHS, Measures, Consent Form, Evaluation Team and References - as referred to in the report.

This final report was written for use by different audiences and stakeholders of the Aboriginal Head Start program in the NWT including staff, AHSUNC parents and guardians, community leaders, evaluation personnel, government personnel and groups interested in early childhood education.

As much as possible, terms and explanations of evaluation processes were written in plain language. A list of terms used, including abbreviations and acronyms are included in Appendix A: List of Terms and Abbreviations. The abbreviations AHS and AHSUNC are used interchangeably throughout the report, and reflect the Aboriginal Head Start Program in Urban and Northern Communities.

A series of highlights, as outlined with the graphic, includes information from the literature that may be of interest to the reader with suggested references. The literature quoted in this final report is not intended to be exhaustive of the presented topics and the reading audience is referred to the list of references for further information. Furthermore, the format of
this final report includes spacing and grouping of information so as to appeal to different groups of readers.

The Western Arctic Aboriginal Head Start Council has a website where further information and downloadable documents of previous works can be found. Please refer to the following coordinates to access the website - www.nwtheadstart.org.
Executive Summary

AHSUNC in the Northwest Territories

Aboriginal Head Start in Urban and Northern Communities (AHSUNC) is a federally funded early childhood program for young Aboriginal children and their families. AHSUNC programs support the spiritual, emotional, physical and intellectual growth of each child. Components for each program include culture and language, education and school readiness, health promotion, nutrition, social support and parental involvement. Currently, there are eight Northwest Territories Aboriginal Head Start programs (NWTAHS) in the communities of Fort Smith, Hay River, Fort Providence, Bechokò, Yellowknife/Ndilo, Inuvik, Paulatuk and Fort McPherson.

Previous Evaluation Studies with AHSUNC in the NWT

In 1998, the NWT completed a summative report of the Aboriginal Head Start program in its first two years of operation. Following this first report, the Western Arctic Aboriginal Head Start Council (WAAHSC) decided to conduct an outcome evaluation of the seven AHSUNC programs that were in operation at that time. In 2000, WAAHSC developed a model of evaluation in consultation with personnel who were experienced in evaluation design and community-based evaluation with culturally-distinct groups. As well, current best practices in the evaluation of early childhood programs in North America were reviewed. The model was a pre/post-test quasi-experimental design of school readiness and program quality, and is referred to as the “NWTAHS Model of Program Evaluation”.

In 2003-2004, the NWTAHS Model of Program Evaluation was repeated. These two baseline data collections provided information of the seven NWTAHS programs and more than 300 NWT children, aged three to four years who participated in these programs. During the 2000-2001 and 2003-2004 evaluation studies, a longitudinal pilot was completed in Fort McPherson with AHSUNC graduates and their age-matched peers who did not attend the Aboriginal Head Start program. Both longitudinal pilot studies in kindergarten/grade one, and in grades three and four in this one NWT community provided promising results regarding the use of the NWTAHS Model of Program Evaluation including the approach, participation of NWTAHS early childhood educators and the methodology.
The NWTAHS evaluation studies in 2000-2001 and 2003-2004 showed the following:

1) NWTAHS programs have “good to excellent” classroom quality, as measured on the Early Childhood Environment Rating Scare- Revised or ECERS-R. Classroom quality in the program forms the basis for a safe, culturally-sensitive and nurturing learning environment.

2) NWTAHS children displayed significant improvement in school readiness skills from the fall to the spring (2001 cohort, $n=43$ and in 2004 cohort, $n=33$).

3) There was a range in skill levels among the NWTAHS children; those who started the program with fewer skills showed greater gains during the NWTAHS program year.

4) Results for the 2001 and 2004 cohorts of NWTAHS children indicated gains in social skills (cooperation, assertion and self-control), with a slight difference between boys and girls.

5) The two longitudinal pilot studies of NWTAHS graduates indicated these children did better on measures of grade level achievement and social skills, as compared to their age-matched peers who did not attend the program.

NWTAHS Model of Program Evaluation

The NWT Model of Program Evaluation model was based on the premise of “made in the NWT” for NWT communities, by NWT communities, so as to provide the best possible early childhood program for the children and future leaders. The methodology, as per the model of program evaluation, was and continues to be accountable to the NWTAHS programs, parents and communities. This type of participation in an evaluation was new for those involved and is consistent with established models of inquiry that are based on collaboration from start to finish.

*NWT Model of Program Evaluation At-A-Glance*

- WAAHSC continues to lead this community-based model;
- The model of evaluation recognized the starting point of the NWTAHS programs;
• The purpose of the evaluation model was for program development, enhancement, strength-building and future planning;

• The Model prioritized specific areas: classroom quality and school readiness;

• Provided methods that would be consistent with peer-reviewed literature;

• Meets the challenges of culturally appropriate assessment;

• The Model was developed with a partnership between NWTAHS, evaluation personnel and policy/government.

The NWTAHS Model of Program Evaluation continues to be used in the NWT as a guide for evaluation, program development and currently as the basis for the curriculum development project. Furthermore, in sharing the work on the model with other jurisdictions across Canada, the NWTAHS Model of Program Evaluation was adapted in 2007 for the Alberta Aboriginal Head Start programs, and for the Aboriginal Head Start programs in the Yukon and Nunavut Territories in 2008 and 2009. From the feedback heard regarding the model, it appears that the use of a participatory action approach and staying close to the needs of the AHSUNC programs in the NWT has been the basis for its successful implementation.

**NWTAHS Longitudinal Evaluation (2008) - Methodology**

The purpose of the 2008 longitudinal evaluation of the NWTAHS program was to conduct a participatory evaluation of the impact of the program on AHSUNC graduates years after they had attended the program. The design of this longitudinal study was consistent with the methodology of the NWTAHS Model of Program Evaluation. The evaluation questions for the 2008 longitudinal evaluation were:

1) What skills and knowledge do AHSUNC children have years after they have attended the program? (longitudinal) Do these skills differ from their age-matched peers (cross-sectional)?

2) How do the children’s skills vary across skill and literacy levels in verbal, reading/writing, math and social skills?
3) Are there differences in achievements among AHSUNC children who enter the program with lower or higher skills and knowledge (longitudinal and cross-sectional)?

4) Do the achievements of the AHSUNC children differ among the two cohort groups studied, that is the 2000-2001 and the 2003-2004 groups of AHSUNC graduates in the NWT?

5) Are there differences in the patterns of skills and achievements for AHSUNC graduates based on attending rural or urban AHSUNC programs?

The longitudinal evaluation of NWTAHS included 98 school age children who had attended the AHSUNC program in previous years. This sample of AHSUNC graduates represented 27% of the original baseline sample from the 2000-2001 and 2003-2004 outcome evaluation studies in the NWT. The comparison group included the NWTAHS children’s age-matched peers from the same classroom and included 133 children. The total sample for the 2008 longitudinal evaluation was n=231 children (AHSUNC graduates and their age matched peers) and who were from the communities of Yellowknife/ Ndilo, Bechokò, Fort Providence and Hay River. The measures used for the longitudinal evaluation of AHSUNC in the NWT sampled children’s developing literacy, social skills and receptive vocabulary and were chosen as part of the evaluation design and the NWTAHS Model of Program Evaluation.

NWTAHS Longitudinal Evaluation (2008) - Findings and Discussion

The 2008 findings reported here are consistent with similar studies of a longitudinal design with early childhood programs. AHSUNC graduates in the NWT are “holding their own” when it comes to school achievement and verbal skills, as compared to their age-matched peers. The findings from the 2008 longitudinal study showed the following:

1) Both the AHSUNC graduates and their age-matched peers scored within the low-average range for receptive vocabulary, a measure of verbal and language skills (n=231).

2) Both AHSUNC graduates and their age-matched peers scored in the low-average range for school achievement, which includes reading, numerical operations and word writing (n=231).
3) The follow-up of a sub-group of AHSUNC graduates, who were in Grade 3 in 2008 maintained their level of verbal skills from the end of the program year in Aboriginal Head Start (n=18). Another sample of Grade 6 AHSUNC graduates also maintained their level of cognitive and school readiness skills, from 2001 to 2008 (n=21).

4) In one NWT school, the comparison between grade levels of language and school achievement for AHSUNC graduates showed no differences. That is there was no fade-out effect of the impact of the AHSUNC program on AHSUNC graduates.

5) There were no gender differences in the scores for AHSUNC graduates.

6) There were stronger overall scores on measures of language skills in the larger urban NWT communities that participated in the longitudinal study in 2008, which was also linked to stronger classroom quality measures in the AHSUNC program.

There remain many areas to study including the effect of program duration, age of entry into the program (three or four-year-old program), the use of curriculum and others factors that influence the growth and development of young children. As a first multi-site longitudinal study of AHS in the NWT, WAAHSC and the participating communities can be proud of their hard work and accomplishment. The completion of this longitudinal study provides the NWTAHS sites with the capacity to report on aspects of program outcomes over an eight year timeline, both before, during and years after the children have attended the program.

The methodology used here continues to be well received in the NWT due to its basis from the early childhood literature and its cultural relevance to the interests of NWTAHS program staff and managers.

**Using Evaluation Findings for Curriculum Development**

Following the discussion of the findings from the longitudinal evaluation with AHSUNC graduates in the NWT in 2008, WAAHSC decided to proceed with an approach to curriculum development that is consistent with the NWTAHS Model of Program Evaluation. The discussion of the development of a curriculum document for the NWTAHS programs has been an issue from the start of the evaluation strategy work with WAAHSC in 2000. Now, with the insights gained from community-based program evaluation, and critical self-reflection by WAAHSC and AHSUNC sites in the NWT, it has become timely to integrate findings with curriculum development.
The NWTAHS Model of Program Evaluation has guided the approach taken with the WAAHSC Curriculum Project in continuing with collaboration, consultation, ownership and remaining true to community values and traditions of the participating Aboriginal groups. To date, three consultation meetings have been held with WAAHSC to link the evaluation findings to the planning of a curriculum development project. Priority areas such as language based learning, thinking and reasoning skills and other areas will be important areas of the curriculum document which will be pilot tested in NWTAHS communities in 2010.

Final Comments

In conclusion, the findings from the 2008 longitudinal study are encouraging and informative for the WAAHSC, as they are consistent with the perceptions and beliefs about the critical place that the AHSUNC program plays in the education of young Aboriginal children.

The Western Arctic Aboriginal Head Start Council supports continued program enhancements, staff training and curriculum development that have flowed out of the evaluation work that was started in 2000 and is willing to continue to share with others so as to provide the “best possible program for our children”, as put by one of the founding members of the Western Arctic Aboriginal Head Start Council.
1 Aboriginal Head Start in Urban and Northern Communities (AHSUNC)
1 Aboriginal Head Start in Urban and Northern Communities (AHSUNC)

This first chapter provides an overview of the Aboriginal Head Start Program in Canada and in the Northwest Territories (NWT). The roots of the Aboriginal Head Start program are traced back to the Head Start and school readiness movement in the United States which began in 1962, as well as other model early childhood programs. The final section in this chapter includes how the NWT Aboriginal Head Start (NWTAHS) became interested in program evaluation.

1.1 Aboriginal Head Start in Urban and Northern Communities - Canada

Aboriginal Head Start (AHS) in Urban and Northern Communities (AHSUNC) is a federally funded (Public Health Agency of Canada, formerly Health Canada) early intervention program for Aboriginal children and their families who live in urban and northern communities. The program was introduced in 1995 to enhance child development for Aboriginal children living in urban and northern communities (Health Canada, 1998). Aboriginal Head Start On Reserve (AHSOR) followed in 1998.

The AHSUNC program was designed with Aboriginal stakeholders to meet the spiritual, emotional, intellectual and physical needs of Aboriginal children. The program was designed to build on Aboriginal people’s commitment to positive change, and programs include the promotion of culture and Aboriginal languages, school readiness, health promotion, nutrition, social support and parental involvement for young children up to five years of age. Parental involvement is a cornerstone of Aboriginal Head Start.

Aboriginal Head Start is a distinctive initiative because of the consultations that were done with urban and northern Aboriginal communities to develop the program, its goals and principles. Consultations took place in 25 cities and towns including all the provincial and territorial capitals. A broad representation of communities was visited to gather input as to the design and outline of the Aboriginal Head Start program. Representatives from about 300 organizations throughout Canada including Aboriginal (First Nations, Métis and Inuit) organizations participated in the consultations leading up to the development of the Aboriginal Head Start program.
In 2005-2006, it was reported that 4,500 children participated in the AHSUNC program in 131 sites across Canada, in eight provinces, three territories and with a total expenditure of $31,214,712 (Government of Canada, 2007). A total of 9,101 children participated in 354 sites as part of the Aboriginal Head Start on Reserve (AHSOR) program with expenditures of $50,165,212.

Roots of Head Start

Head Start was the idea of Sargent Shriver and Eunice Kennedy Shriver who, in 1962, had a vision to improve the school performance of children in need. Head Start is just that, a way for children and families in need of a “running head start”.

Today, Head Start in the United States is a $7 billion dollar Federal Program with over 900,000 children participating in the federal government’s largest education initiative for young children in poverty. Early Head Start is a companion initiative that was started in 1995 to serve children from birth to three years of age (Administration for Children and Families, 2009).

The primary goal of the AHSUNC initiative is to demonstrate that locally controlled and designed early intervention strategies can provide Aboriginal preschool children in urban and northern settings with a positive sense of themselves, a desire for learning, and opportunities to develop fully and successfully as young people (Health Canada, 1998).

The early childhood research on intervention programs adds strength to the development of the program through key findings such as the involvement of parents in the program, providing for the needs of the whole child, improved health and education for children who participate in high quality programs, enhanced community capacity to meet the educational needs of children and improved linkages with community resources.

Early childhood intervention program research together with the desire of Aboriginal communities to meet the needs of their young children led to the development of Aboriginal Head Start in Canada.

Program Principles and Guidelines

The Aboriginal Head Start initiative is diverse and flexible to meet the needs of community project sponsors and Aboriginal groups and also focuses on providing programs that promote Aboriginal languages and cultures.
Projects aim to support children and parents in feeling a sense of pride and confidence, a desire to learn, opportunities for positive social and emotional development and improved health and well-being.

The Aboriginal Head Start Program was first supported by statements of beliefs and values about children, program standards, and principles and guidelines (Health Canada, 1998). A brief excerpt of the original AHSUNC principles and guidelines is outlined below.

Aboriginal Head Start will:

1) support the spiritual, emotional, intellectual and physical growth of each Aboriginal child.

2) support and encourage each Aboriginal child to enjoy life-long learning.

3) support parents/guardians as the primary teachers and caregivers of their children.

4) recognize and support the role of the extended family in teaching and caring for Aboriginal children.

5) include the broader Aboriginal community as part of the project from planning to evaluation.

6) make sure the project works with and is supported by other community programs and services.

7) make sure the resources are used in the best way possible in order to produce measurable and positive outcomes for Aboriginal children, their parents, families and communities.

AHSUNC Program Components

The program components, as listed below, have been the foundation of programming for AHSUNC, and have remained consistent since the beginning of the program in 1996 for NWT communities.

1. **Culture and language** - the purpose is to provide children with a positive sense of themselves as Aboriginal children and to build on the children’s knowledge of their own languages, if possible.
2. **Education and school readiness** - the purpose is to support and encourage each child to enjoy life-long learning through an early childhood program that includes physical well-being, social-emotional skills, language and cognitive skills, and general well-being.

3. **Health promotion** - the purpose is to provide an early childhood program that emphasizes healthy living and to empower parents and guardians and those involved with AHSUNC to increase control over and improve their health.

4. **Nutrition** - the purpose is to provide food that will help children meet their nutritional needs, and to educate staff and parents of the link between nutrition and a child’s ability to learn and develop physically and mentally.

5. **Social support** - the purpose is to ensure that the AHSUNC families have access to resources and community services to assist with the quality of their lives.

6. **Parental and family involvement** - the purpose is to support and encourage parents’/guardians’ and families’ role as children’s primary teachers through involvement with classroom activities, providing for extended family to participate in the program and not making a child’s registration and participation dependent on one or both parents’ participation.

The Aboriginal Head Start program participates in a number of guidelines that include being accountable to the community, funding partners and evaluating the program through developing locally specific evaluation criteria, incorporating reviews of all aspects of programming and participating in evaluation activities. Each site and community determines how best to provide the required components in a context that reflects the local traditions, values and beliefs of its community members. There is no pre-determined curriculum or approach, but AHS programs generally follow a preschool/early childhood learning format that is based on child-centered learning.

The hallmark of many AHSUNC programs is the enrichment of local Aboriginal culture and language programming, which makes the program distinct from other early childhood intervention programs. Most programs, both on and off reserve operate primarily in English, with exposure to one or more Indigenous languages from their respective community. Each site determines the level of teaching the Aboriginal language and culture, in what
format and for how long per day of programming. This type of ownership of the content of the AHS program was incorporated into the design by Aboriginal people, who supported the promotion of culture and language in AHSUNC programs from day one.

AHS programs are locally controlled and allow for program innovation and local staff development, which is primarily through early childhood education training programs. Most programs are staffed by Aboriginal people, who serve as early childhood educators, program managers, Aboriginal language instructors, administrative support, bus drivers, cooks and other local support workers. Community elders and parents play important roles in all programs, through continuous involvement, support and guidance.

1.2 AHSUNC in the NWT - 1996 to 2009

The Northwest Territories, otherwise known as the NWT, consists of 1.2 million square kilometers that includes 33 communities and a population of approximately 42,900 people (Statistics Canada, 2009). Close to one half of the residents of the NWT are of Aboriginal descent and there are eleven official languages in the NWT: English, French, Tlicho, Chipewyan, Cree, Gwich’in, Inuvialuktun, Inuktut, Inuinnaqtun, North Slavey and South Slavey. There are eight AHSUNC programs in the following NWT communities:

- Ndilo/Yellowknife
- Bechokò
- Fort Smith
- Hay River
- Fort Providence
- Fort McPherson
- Inuvik
- Paulatuk

NWTAHS programs are consistent with the six AHSUNC components: culture and language, education and school readiness, health promotion, nutrition, social support and parental involvement. The most common language of instruction in the NWTAHS programs is English, with sites integrating their respective Aboriginal language in the program. Each AHSUNC site determines the content of their Aboriginal culture and language activities. There are seven different Aboriginal languages represented in the eight AHSUNC programs in the NWT and include the following languages: Chipewyan and Cree (Fort Smith), Weledeh dialect of the Tlicho Language (Ndilo), Tlicho Language (Bechokò), South Slavey (Hay River and Fort
Providence), Gwich’in (Fort McPherson and Inuvik) and Inuvialuktun (Inuvik and Paulatuk).

AHSUNC programs in the NWT serve 10 to 40 Aboriginal children ages three and four years of age, in a half day early childhood program. Parents and community members are involved in the program in a variety of ways which could include program meetings, fund-raising events, cultural activities, community on-the-land excursions, special events, such as, end of the year graduation activities and donations of goods and time in the program.

Each NWTAHS site determines the level of parental and community involvement for its program, based on the respective community. As well, some programs offer parenting support programs in addition to craft evenings, language classes and other activities of interest to Aboriginal Head Start parents and community members. Parental and community involvement has been a cornerstone of the Head Start movement and early childhood programming and efforts are made to include parents, guardians, local elders and community members throughout the program.

The Western Arctic Aboriginal Head Start Council (WAAHSC)

A council of the NWT programs was established in 1998 to provide a voice for Aboriginal children, parents and families to share information about the program, and to support the direction of the NWTAHS programs. This council was named the Western Arctic Aboriginal Head Start Council or WAAHSC, and remains in operation today. A few highlights of the NWTAHS programs and WAAHSC are listed here.

1996-1997 The first round of AHSUNC programs in the NWT open their doors for children, parents and communities.

1998 The Western Arctic Aboriginal Head Start Council (WAAHSC) puts forward its terms of reference, process, chair and structure.

2000 The WAAHSC initiates their own outcome evaluation, to follow a participatory action model, where AHSUNC programs are involved in the evaluation.


2008  Longitudinal evaluation of AHSUNC graduates begins in Ndilo and Yellowknife, Bechoko, Hay River and Fort Providence.


Further highlights of the history of WAAHSC can be found in Appendix B: History of NWTAHS-1995-2009.

1.3 Roots of Head Start - Early Intervention and School Readiness

Head Start is the oldest public-funded early intervention program in North America which started in 1962 as a program to improve the school outcomes of children from less fortunate backgrounds. Head Start targets three and four-year-old children living in poverty and is funded by the US federal government to provide a centre-based program, child health screening and referral, hot meals, social and mental health services for both the child and the family, and may be offered on a part-time or full-day basis. Most children in US Head Start attend for two years (ACF, 2009).

The US Head Start program serves many minority group children throughout the US including African-American, Hispanic and North American Indian children, and most recently has developed Early Head Start, a program for children ages birth to age three years and their families. The US Head Start movement is substantially larger than the Canadian Aboriginal Head Start program, and has engaged in many years of program evaluation and research since 1962 (ACF, 2003; ACF, 2009).
Aboriginal Head Start shares many aspects of its foundation program, US Head Start, in preparing children for a successful transition from home to school, health promotion and the involvement of parents in the planning and overall running of the programs. US Head Start personnel were consulted for the development of Aboriginal Head Start in the 1990’s, including the founding father of Head Start, Dr. Edward Ziegler. Current linkages with US Head Start and Aboriginal Head Start have included presentations by the WAAHSC in Washington, DC and sharing of successes and challenges through informal means with Indian Head Start.

Importance of School Readiness

School readiness has been a primary focus of the US Head Start and continues to be a mandated goal of Head Start in the twenty-first century. School readiness is broadly defined and can be conceptualized differently, based on one’s perspective. Generally, school readiness came about as a priority in Head Start and other early childhood intervention programs because of the findings from various studies. For some children, who start school significantly behind, the readiness gap is rarely closed and tends to widen as these children move through school (Lee & Burkham, 2002; Duncan, Claessens, Huston, Pagani, Engel and Sexton, 2007).

Children who are not prepared for kindergarten and the environment of structured learning may have a harder time mastering the curriculum, and will not be ready for further education. The implications of early educational delays have been found to be broad and profound in terms of school difficulties, social-emotional consequences and diminished lifelong outcomes (Alexander & Entwisle, 1998; Garces, Thomas & Currie, 2000; Gilliam and Jones, 2006).

School readiness in the preschool years is the hope to address and prevent later school challenges. Interventions for older students in schools have shown limited success in addressing children who arrive at school behind where they need to be, because they offer too little too late for most children (National Research Council and Institute of Medicine, 2000; Ramey & Ramey, 2004). It is generally found that getting off to a good start in one’s education is a strategy for improving the odds of well-being, happiness and competence in adult life and hence the focus of school readiness in Head Start Programs.

Cost-Benefit Savings and Early Childhood Programs

A number of high quality early childhood programs, with extensive resources for staffing, program development, space, intervention with families and
longitudinal evaluation of child outcomes, have provided the strongest proof of the effectiveness and cost-benefit ratio of providing young children with early childhood intervention programming to give them the “head start”.

The High/Scope Perry Preschool Project, the Carolina Abecedarian Project and the Chicago Child-Parent Centers (CPC) are model programs that have demonstrated, over time (20 to 40 years), the link between preschool participation and child development outcomes. These model studies have demonstrated that preschool participation has been associated with reductions in grade retention and the need for program support, and reductions in high school leaving. Furthermore, all three model programs have significant cost-benefits, that is, more money is saved in the long term with earlier investments in preschool programs (Ramey, Campbell, and Blair, 1998; Reynolds, 1999; Schweinhart, Barnes & Weikert, 1993; Schweinhart, Montie, Xiang, Barnett and Nores, 2005).

In the North American field of program intervention for children, including US Head Start and Aboriginal Head Start, often it is these cost-benefit studies that are of interest to funding agencies. The findings from these high quality programs and evaluation studies have demonstrated the high returns of investments, where high quality early childhood programs are in place.

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**Money Saved from Early Intervention**

Research from the Perry Preschool Project has shown that for every dollar invested in preschool prevention programs, a $7 benefit was achieved by the time the child became a young adult, and a $13 benefit was achieved by the time they are mature adults, around 40 years of age (Schweinhart, Montie, Xiang, Barnett and Nores, 2005).

The Perry Preschool Project is well known because of its accomplishments that span academic, economic, social and behavioural outcomes, including many indicators such as avoidance of special education placements, higher-educational levels, lower rates of crime and lower rates of teenage pregnancy. These results, as well as the cost savings as above, over 36 years of follow-up, show what can be accomplished, but their applicability to other government programs such as Head Start remains untested, as the Perry Preschool was a model program with great resources of funding and support for teaching, program development, space and parental involvement and for evaluation and research (Phillips and White, 2004).
Evaluation of US Head Start

US Head Start programs and services have been evaluated since the beginning of the program in 1962, and efforts continue today to conduct large and small scale studies, research and program evaluation of all aspects of this early intervention program. As well, independent research and evaluation has been conducted with various hubs of Head Start programs and through partnerships between universities and non-profit organizations. The number of studies and evaluation works rank in the thousands, and span all areas of the program including child outcomes, program quality, teacher qualifications, parent involvement, community factors, demographics, special needs, cultural factors, language development, social skill development and many other areas (ACF, 2009).

Two prominent US Head Start evaluations by the federal government have included the Family and Child Experiences Study or FACES, which collects information of a large national representative sample of Head Start programs, classrooms, teachers, parents and children with three waves of data collection in 1997, 2000 and 2003 (ACF, 2003). Areas of evaluation for FACES included school readiness (language and word knowledge, numerical skills, pre-reading and pre-writing skills), social skills, parent interviews, classroom quality and classroom activities. In 2002, the longitudinal Head Start Impact Study was initiated with a large nationwide sample (2,449 children from 23 communities), including randomized assignment of eligible children from the same neighbourhood (ACF, 2005). Results from these studies have shown higher scores for Head Start participants (Puma, 2005).

Much effort, resources and the gathering of practitioners, policy makers and researchers has occurred in the United States to guide the Head Start movement through political, conceptual and community-based pressures to support its continued development and expansion (Phillips and White, 2004). Guiding questions for a comprehensive monitoring and evaluation of the program include the following:

1) Which Head Start practices maximize benefits for children and families with different characteristics under what types of circumstances?

2) How are gains sustained for children and families after the Head Start experience?

3) How can the gap between researchers and program practitioners be addressed to benefit the Head Start program?
Evaluation and research of Head Start in the US continues to be integrated with all program components including funding discussions, training, decision-making, building of research-practice partnerships so as to support a continuous moving back and forth between what is learned about Head Start and what the program is expected to accomplish. Furthermore, this integration of research and practice in Head Start ensures that lessons learned from publicly funded early childhood programs are widely dispersed throughout the early childhood community so as to benefit all.

1.4 AHSUNC Evaluation and the NWT

Similar to the US Head Start Program, the AHSUNC program in Canada has been the focus of different evaluation efforts. At first, administrative surveys or process evaluations were conducted on a broad national scope that included summaries of participation rates, demographic characteristics of children served, living situations of families, Aboriginal languages taught in programs, daily activities, frequency of social supports given, frequency of parental involvement, program administration/coordination and sponsor issues including program challenges, financial and future program needs.

Following the administrative surveys, as well as a Territory-wide (Eastern and Western Arctic AHSUNC communities) descriptive evaluation of program activities in 1998, the WAAHSC decided to proceed with a path of outcome evaluation to address questions members had about the impact of the program on children and communities. Areas of interest from the beginning included how the programs were doing, how the children were doing, what parents/community members thought about the program and what enhancements were needed to provide the best possible early childhood program for Aboriginal children in the NWT.

Furthermore, there was a keen interest in 1999 to establish a system for following AHSUNC children over time, that is longitudinally, and to look at other programs in early childhood, such as US Head Start to see how they had evaluated their program. It was evident from national and local perspectives that partnerships would be essential to any future evaluation activities.
What is the Difference between Evaluation and Research?

Evaluation practice is different from research in terms of purpose, method and use and refers to the process of determining the merit, worth or value of a program or the product of that process. Evaluation studies are usually conducted on social and educational policies, programs, products, or personnel where social inquiry, politics and science are part of the process (Mertens, 2005).

Evaluation studies are most often conducted on programs designed to address a specific issue, population or program intervention. Program evaluation is thus intertwined with reviewing program objectives, purpose and adherence to the priorities and directions of the program being evaluated. Often, evaluation activities are mandated as part of a program intervention and subject to a specific purpose, methods and areas of inquiry.

In contrast, research-based inquiries are largely based on generating new knowledge and less focused on decision making and direct application (Mertens, 2005).
2 NWTAHS Program Evaluation Development
2 NWTAHS Program Evaluation Development

This second chapter outlines the beginning of program evaluation by the WAAHSC from 1998 through 2004. Discussion is included regarding the evaluation needs put forward by AHSUNC program personnel, literature that was used to guide the first years of evaluation, how culture and language issues were addressed and the chapter ends with a summary of the 2000-2001 and 2003-2004 evaluation studies.

2.1 NWTAHS Needs and Preparation for Evaluation

WAAHSC members first met in February of 2000 to review what evaluation efforts had occurred to that point, both locally and nationally, as well as to review in what direction members and NWTAHS sites wanted to proceed. Over 30 potential evaluation questions and areas of study were discussed at this first meeting with WAAHSC and government partners. These questions included key areas of the AHSUNC program; for example, child development, social skills, parent and family, culture and language and parental involvement. A few examples of the questions first raised in the early planning stages of the evaluation work are listed below.

*Sample Evaluation Questions (February/2000)*

Question: What is working in the Aboriginal Head Start programs, and what could be changed?

Question: What is the feedback from parents and community members about the program?

Question: What is the progress of Aboriginal Head Start students over time; that is, how are the children doing once they get into school?

Question: Are there ways to show the parents how the children are progressing over the year that they are in Aboriginal Head Start?

Question: What do parents and community members think of the culture and language programming?
Steps in Preparation for Evaluation Work (February to September/2000)

A number of steps were developed during this February/2000 meeting to proceed with an evaluation initiative that was community-based and consistent with the views and direction of WAAHSC members. After generating general ideas about the evaluation in the short and long term, the next step included building a partnership with a contractor who had experience in conducting evaluation studies in community settings and who was knowledgeable in evaluation methodology, AHSUNC and working with diverse cultural groups. A call for proposals was put out for this independent evaluation contractor to work with WAAHSC and NWTAHS programs.

It is clear that from the beginning of the NWT program evaluation the process was driven by the WAAHSC members and that they were eager to learn about evaluation and its application to the Aboriginal Head Start program. Although an evaluation contractor was hired by WAAHSC and government partners, a mutually respectful relationship was being developed among all groups. Subsequent steps in preparation included a number of tasks to seek out supports, methods and information, which were relevant to the work of WAAHSC.

Step 1  Work with WAAHSC to establish evaluation questions, scope and design (qualitative, quantitative, observation, descriptive, case-study, quasi-experimental, mixed-method).

Step 2  Conduct a review of other similar works (referred to as the literature), concerning methods, ways of doing evaluation both in the published and non-published fields of inquiry. Focus on similar programs to Aboriginal Head Start, working with culturally-diverse groups, use of standardized measures, use of surveys, use of observation measures.

Step 3  Complete a short list of early childhood tools or measures for review and consultation with WAAHSC.

Step 4  Review with WAAHSC evaluation questions, possible indicators, outcomes and tools for data collection. Complete a first draft of a strategy that includes the proposed evaluation, details of specific questions, indicators and data collection tools or measures. Also consider ethical guidelines for the evaluation strategy.

Step 5  Design an on-site training component of the evaluation strategy for AHSUNC staff, including data collection procedures and ethical considerations.
The preparation work and chunking the tasks into steps allowed the inherent capacity of AHSUNC personnel to shine through. Attention was paid to community and environmental factors, as well as the workload of WAAHSC members and AHSUNC staff.

Figure 2-1 summarizes the link between the AHSUNC project in the NWT, its project activities, the steps taken to develop the evaluation strategy in 2000.
2.2 Relevant Literature

A summary of the relevant literature that was reviewed for the development of the NWTAHS evaluation strategy is described below.

*Canadian and US Literature*

In preparation for the NWTAHS evaluation strategy, certain areas of the North American literature were reviewed, with the purpose of seeking out assistance as to the direction the WAAHSC was taking.

Canadian reference material was rather limited and included information from the National Longitudinal Study of Children and Youth (NLSCY), the Moncton Evaluation Project, the Community Action Program for Children - National Impact Evaluation (1996-99), and related documents on evaluation work with Aboriginal Head Start from a national perspective, such as the process survey: “Children Making a Community Whole: A Review of Aboriginal Head Start in Urban and Northern Communities” (Health Canada, 2000). As well, qualitative evaluation projects such as “Johnny National” were reviewed, but found to have less relevance to questions posed by WAAHSC. (Highway & Yerxa, 2000)

The literature from the United States was more informative for WAAHSC, as program practitioners in these NWT communities were becoming aware of the Perry Preschool, and other groundbreaking early childhood studies such as the Abecedarian Project at the Frank Porter Graham Child Development Centre, University of North Carolina and the Child-Parent Centres in Chicago which revealed positive results in the long term (Schweinhart, 2005; Ziegler, Gilliam, & Jones, 2006). Furthermore, US Head Start has a similar target group of children and families, and also has served many children from culturally-distinct groups, including North American Indians, and what is referred to as Indian Head Start.

*Historical Research Approaches with Aboriginal Groups*

The impact of conducting research with Aboriginal communities has, according to many, been one of exclusion, oppression, racism and negative experiences for individuals, families and communities. In recent years, concerns have been raised by Aboriginal groups and communities that there has been a lack of meaningful engagement and collaboration with the people that are the targets of the research or evaluation projects. Often, research agendas have been set up by people external to the program or community, and have no direct relationship with the program.
In recent years, there have been efforts to bring about change in Aboriginal communities through the use of participatory action models of research and evaluation (Potvin, Cargo, McComber, Delormier & Maccaulay, 2003; World Health Organization, 2003). As well, some authors have suggested ways to approach research in First Nations communities, which includes listening to local advice, being authentic and personal in all interactions with communities and minimizing risks and increasing the benefits of research for community members (Darou, 2000).

**Ethical Issues**

All evaluation and research work needs to operate within an ethical frame that is consistent with accepted practices, laws and procedures that are in place within community settings such as Aboriginal Head Start. The practices of the Canadian Evaluation Society and the Canadian Psychological Association, as well as the Standards for Educational and Psychological Testing (American Educational Research Association, 1999) were examined.

The following ethical considerations were cited from the literature, and integrated with the evaluation strategy for the WAAHSC.

- Use of informed consent with all AHS families;
- An information package detailing the nature of the evaluation, measures, timelines and procedures to be provided to parents and guardians; an in-person meeting to go over the procedures, where possible, can help to maintain an openness with NWTAHS parents;
- Benefits and risks to be outlined for parents and guardians, who have the right to decline participation, with no impact on the care of their children;
- Privacy, confidentiality and secure storage of the evaluation information is necessary and a priority;
- Evaluation team, program staff and all those working with the evaluation project are to be provided with evaluation and data collection training;
- Methods, measures and data collection procedures are consistent with culture-based assessment methods (American Educational Research Association, 1999).
Different Methodologies in Evaluation

From the beginning of the strategy work, it was apparent that a research-based approach was not appropriate to the proposed work with Aboriginal Head Start programs in the NWT. The literature on evaluation methods of relevance to the NWTAHS included studies to assess program effectiveness, classroom quality, child outcomes in the short and long term and community involvement in the program. Much of the literature in these program related areas came from the US literature on Head Start and other early intervention projects.

Of direct importance to WAAHSC was the involvement and capacity building of NWTAHS staff, so as to meet the needs of the programs for the benefit of the children. Definitions of program evaluation, use of findings for program enhancement and longitudinal models of evaluation were highlighted by WAAHSC as being relevant to their proposed evaluation strategy.

The work in Canadian jurisdictions that used participatory action models of evaluation were particularly useful in determining how these models could be used with Aboriginal groups and communities (Kirmayer, Simpson & Cargo, 2003). Several works from the literature support the use of a participatory action approach to assist in the development of programs, that are respectful of different cultures and to provide information for future program enhancements (Mertens, 2005).
Participatory Action Evaluation

Evaluation as an objective social science method of inquiry has evolved over the years to include many different variations including empowerment evaluation, developmental evaluation, transformative evaluation and inclusive evaluation (Mertens, 2005).

Participatory action evaluation came from the transformative approach to evaluation, as led by community organizations, consumers, cultural groups and those at a distance from decision making, so as to address inequalities and differences in power and control.

Broadly, participatory evaluation and research means that evaluation is a participatory process that involves the stakeholders in the various tasks of the evaluation so that the results are understandable, to project participants. Furthermore, this approach to evaluation attempts to negotiate a balance between generating findings and benefiting the community or program that is being reviewed (Macaulay, Commanda, Freeman, Gibson, McCabe, Robbins, Twohig, 1999). The project participants in this approach act as co-planners with evaluation personnel, whose role is to be the facilitator of the evaluation process, but who shares control and involvement in all phases with project participants. As co-planners, the project participants complete the following tasks:

1. Determine the evaluation questions that need to be addressed.

2. Help define and identify sources of data required to answer evaluation questions.

3. Are involved in the data collection and analysis, and the sharing of findings with communities.
2.3 Culture and Language Issues

The field of early childhood development across North America, including Head Start and Aboriginal Head Start, has had to address the influence and place of culture and language differences throughout programming, administration, staffing, work with parents/communities and in program monitoring and evaluation. As well, Head Start programs have had to deal with a mainstream culture that is changing due to influences from communication systems and globalization, which have impacts for all cultures around the world.

There has been an interest in the role and place of culture on children and their well-being among different fields of inquiry including education, philosophy, sociology, anthropology, psychology and in communities. Researchers have suggested that changes due to globalization have resulted in an unprecedented access to human differences in language, culture, traditions, values and practices in child-rearing (National Research Council, 2000).

There is no doubt that culture influences child development and needs to be an important factor in the design and implementation of any evaluation project with young children. The NWTAHS from the beginning considered the influence of culture and areas of potential bias with the evaluation approach, methods and measures, and decided to proceed based on support from the literature of cultural competency and a trust in the knowledge that WAAHSC was doing what was in the best interests of their respective communities.

The NWTAHS evaluation strategy addressed, through its preparatory steps for evaluation, the influence of culture, experience and history in the overall evaluation strategy. In working through the perspectives and concerns with respect to cultural relevance in evaluating the NWTAHS program, the evaluation strategy was strengthened. Furthermore, a direction was taken to embrace the place of culture as an inherent part of the AHSUNC program in the NWT, which includes evaluation and monitoring, rather than isolate culture as a distinct outcome or indicator that then would be subject to monitoring, evaluation and programming.

A number of areas of the evaluation strategy from 2000-2004 addressed the issues of cultural sensitivity, cultural competence and cultural relevance and are listed below.

1) **Use of Participatory Action Approach** - This approach to evaluation is consistent with participation by WAAHSC members in all aspects of the evaluation project including decision making, evaluation design, data
collection and analysis of findings. Use of this methodology helps to build trust, supports relationships with evaluation personnel and communities and ensures the evaluation work is meaningful to those they are targeting.

2) **Targeting Specific Early Childhood Areas** - In targeting specific areas of early childhood development, the evaluation strategy is limiting possible bias, where it is believed that cultural differences may impact the results. From the literature, areas of child development that are less impacted by cultural differences include basic developmental skills common to all children worldwide, such as cognitive and language development. Other areas that were not as much the focus in the evaluation design include social functioning, development of values, spiritual development and social-emotional relationships within families and with caregivers. The literature highlights some variability among different groups for these areas of child development.

3) **Evaluation Focus** - The NWTAHS evaluation strategy focused on program evaluation as distinguished from diagnostic assessment, surveillance of risk factors and/or research on child development. Furthermore, the focus of the NWTAHS evaluation was to determine how the children were responding to the AHSUNC program and not to determine the impact of culture on development.

4) **Culturally Competent Practices** - WAAHSC recognized the need to be responsive to the diversity of children and communities within the scope of evaluation proposed for NWTAHS programs, including any language differences (English is the language of instruction in AHSUNC in the NWT). The scope of differences was in terms of geographical location, size of community, First Nation culture and development of the program. The use of culturally competent practice was put into place for training, data collection and throughout all the work in the proposed evaluation. Many of the principles of cultural competence included being respectful, listening to others, developing relationships with local community members, and monitoring all practices for potential bias, misuse of tools and instruments and incorrect assumptions. Furthermore, limitations are listed in culturally-competent practices, with regard to data interpretation, analysis and application to other communities or groups.

5) **Literature from Work with Similar Groups** - The review of the North American literature on early childhood program monitoring, evaluation and research indicated a large number of studies, with different methods, tools and purposes that were for culturally distinct groups. The studies reviewed for this work with WAAHSC indicated uses of evaluation methods, with established measures for the purposes, as proposed by WAAHSC. Therefore,
the literature with diverse groups, albeit US studies, revealed successful
evaluation studies with early childhood groups that would be similar to the
proposed evaluation of NWTAHS.

The implications of culture on research and evaluation methods are evermore
constant for all intervention-type projects, including the program evaluation
of the NWTAHS program. A view of culture as evolving and being part of
an open system of beliefs, values and practices was important in the work
of the NWTAHS, so as to go forward with the use of a participatory action
approach to program evaluation.

### The Challenges in Program Evaluation with Culturally-Distinct Groups - Opposing Views

Among the most important tensions that arise in working with cultural
diversity is the struggle between those who view differences as advantages/
advantages and those who adopt a more “situated” and less ethnocentric
perspective on human diversity (Ogbu, 1994). A situated approach in addressing
cultural differences recognizes that culture and diversity are part of an adaptive,
evolving and open system. In an open system of cultural diversity, the use of
other groups’ models, processes and evaluation approaches are possible so as
to further develop one’s own perspective.

Alternatively, there are views that support developing new and innovative
evaluation models and research frameworks that are culturally specific
including the development of culture-based measures and frameworks that
would be distinct from other groups’ models and methods. Culture-specific
approaches are considered by some to be what is needed to advance the
evaluation agenda with Aboriginal Early Childhood Development in Canada
(Palmantier, 2005).
2.4 Evaluation Strategy

The evaluation strategy for WAAHSC and the NWTAHS programs is summarized in Table 2-1, WAAHSC Evaluation Measurement Strategy. Five questions were outlined in this strategy, along with indicators, data collection tools and measures. The strategy was formed over several months’ work by WAAHSC, and was implemented in the 2000-2001 evaluation of Aboriginal Head Start in the Northwest Territories.

Table 2-2 provides the list of early childhood and parenting tools that were reviewed for use by WAAHSC as part of the evaluation strategy. WAAHSC reviewed the short-listed tools, and decided to proceed with ones that supported a participatory action approach and could be administered by local AHSUNC staff members, had proven validity and reliability with diverse populations and that were consistent with the evaluation questions and indicators from the evaluation strategy.

Furthermore, one measure, the Brigance Preschool Screen (1998), had been used in three of the six AHSUNC communities through school monitoring and preschool assessment. Other considerations included cost, availability of the measure, potential use in a longitudinal evaluation and the degree of ease and appeal the measure had with WAAHSC members. Other measures were excluded because of the time involved in their administration and their qualitative or child-observation focus that was not the intended focus of the NWTAHS evaluation strategy.

Table 2-3 provides the timelines for data collection, information source and targeted project outcomes that were being looked at in the 2000-2001 Evaluation of Aboriginal Head Start in the NWT.
<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Indicator</th>
<th>Data Collection Tools/ Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1-What is the effect of the Aboriginal Head Start program on children in the 6 core areas of AHSUNC?</td>
<td>Improved school readiness- cognitive, child observation, social skills, AHS site data, stories</td>
<td>Brigance Preschool Screens for three and four year old children, Parent survey/interview by AHS site</td>
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<tr>
<td>Question 2-What is the effect of the Aboriginal Head Start on parents/caregivers and families?</td>
<td>Program satisfaction, Parental feedback of cultural awareness, Involvement</td>
<td>Parent Surveys, AHS site data, staff views, Qualitative measures and informal/narratives</td>
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<tr>
<td>Question 3-What is the experience of Head Start staff in the program?</td>
<td>Working with AHS children/families, Cultural awareness and practices, Beliefs about early childhood education, Personal/professional development</td>
<td>Stress measure, AHS site data, Site interviews, Qualitative measures, Staff views</td>
</tr>
<tr>
<td>Question 4-What is the effect of Aboriginal Head Start within the community?</td>
<td>Awareness of early childhood education, Awareness of the role of families in education, Cultural awareness, Working with community groups</td>
<td>Site interviews, Parent/caregiver interviews, AHS site data, Staff views</td>
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<tr>
<td>Question 5- What are the classroom and program characteristics that are associated with better outcomes?</td>
<td>Time spent in AHS program, Screening procedures, Classroom environment, Staff interaction, Program administration</td>
<td>Early Childhood Environment Rating Scale- Revised (ECERS-R), AHS site data, AHS site interviews</td>
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<td>4.</td>
<td>DIAL-3</td>
<td>14. CDI</td>
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<td>5.</td>
<td>DECA Program</td>
<td>15. Brigance Diagnostic Inventory of Early Development</td>
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<tr>
<td>7.</td>
<td>Detroit Tests</td>
<td>17. WISC-III</td>
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<tr>
<td>10.</td>
<td>COR - Child Observation Record (High Scope)</td>
<td>20. Index of Teaching Stress</td>
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</tbody>
</table>

* Indicates Tools and Measures that were chosen for NWTAHS evaluation, and as outlined in Appendix C: Data Collection Measures-Baseline
<table>
<thead>
<tr>
<th>Project Outcome</th>
<th>Information Source</th>
<th>Who</th>
<th>Timing for Collection</th>
</tr>
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<tbody>
<tr>
<td>1. Core areas of AHS (Children):</td>
<td>Brigance Preschool Screen: 3 &amp; 4 year old children and Parent Survey/Interview</td>
<td>AHS Staff</td>
<td>Fall &amp; Spring</td>
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<td>Education and language development</td>
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<td></td>
<td>Social Skills Rating Scale (SSRS-preschool teacher form)</td>
<td>AHS Staff</td>
<td>Fall &amp; Spring</td>
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<tr>
<td>2. Core areas of AHS (Children):</td>
<td>Social Skills Rating Scale (SSRS-preschool teacher form)</td>
<td>AHS Staff</td>
<td>Fall &amp; Spring</td>
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<td>Social Development</td>
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<tr>
<td>3. Classroom and Program Environment:</td>
<td>Early Childhood Environment Rating Scale (ECERS)</td>
<td>Evaluation Team</td>
<td>Fall (Spring was planned but not funded)</td>
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<td>(Children, parents, community and staff)</td>
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<tr>
<td>4. Core Areas of AHS Health &amp; Nutrition</td>
<td>Growth Charts (percentile for height and weight)</td>
<td>AHS Staff</td>
<td>Fall &amp; Spring</td>
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<td>5. Parental Involvement &amp; views of early childhood;</td>
<td>Parent Survey &amp; Interview</td>
<td>AHS Site</td>
<td>Fall &amp; Spring</td>
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<td>importance of culture &amp; Head Start</td>
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<td>6. Staff satisfaction, importance of culture and</td>
<td>Staff Survey &amp; Interview</td>
<td>Evaluation Team</td>
<td>Fall</td>
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<tr>
<td>coping</td>
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<tr>
<td>7. Community Awareness: Importance of culture &amp;</td>
<td>Community/Program Interview</td>
<td>Evaluation Team</td>
<td>Fall</td>
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<td>Head Start for families &amp; communities</td>
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</table>
2.5 Evaluation of AHSUNC in the NWT - 2000-2001 & 2003-2004


Based on the evaluation activities for both timelines, a number of findings were evident and included results for classroom quality of the AHSUNC programs, outlines of findings for children’s development and response to the program, that is, school readiness, and children’s prosocial skill development. Overall, classroom quality was good to excellent, and programs provided a safe, nurturing and culturally rich program for the children and families in each NWTAHS program. Areas for further development included child-centered learning, language development and improved integration of physical play and child-directed learning. In terms of school readiness, NWTAHS children function at wide ranges of levels, and do make progress over the Head Start year. Social skills development was found to be in the average range, but WAAHSC members suggested improvements were needed due to the challenges faced by many families in isolated communities.

The greatest success for both studies was the use of the NWTAHS evaluation strategy, growth in evaluation capacity and interest by WAAHSC members and the application of findings to future planning and enhancement of the AHSUNC program in the NWT. In the first pilot of the strategy, many indicators, questions and tools were used, under tight time constraints, with the result that the resources used did not result in added value for some of the proposed questions from 2000. In the second round of the implementation of the evaluation strategy, WAAHSC decided to focus on a reasonable workload of data collection for its AHSUNC staff, and only collected information on classroom quality and child outcomes. Recognizing the need to lessen the scope of the evaluation strategy had the impact of strengthening the response from AHSUNC staff and the application of the findings to future program improvements and development.
3 NWTAHS Model of Program Evaluation
3 NWTAHS Model of Program Evaluation

This third chapter presents the NWTAHS Model of Program Evaluation, as used for the 2008-2009 longitudinal evaluation of AHSUNC graduates. The model has been strengthened through use, integration with key literature and clarity by WAAHSC. The longitudinal and curriculum work (as described in Chapters 4, 5, & 6) was made possible because of the work done to clarify and document what is now referred to as the NWTAHS Model of Program Evaluation, which is the subject of this chapter.

3.1 What is the NWT Model of Program Evaluation?

The NWT Model of Program Evaluation was initiated under the direction of WAAHSC and NWTAHS programs’ desire to know what is working in the program, how the children are doing, and to gain feedback regarding programming, staff development and training. The NWT model is consistent with participatory action approaches to evaluation and is accountable to the children, parents and communities they work with. The choice of measurements was based on Ponterotto and Alexander’s (1996) premise that culture-bound or biased assessment measures in the hands of well-trained practitioners are preferred over culture-free instruments in the hands of poorly trained practitioners. Additional characteristics of the NWT Model of Program Evaluation are highlighted here.

**NWT Model of Program Evaluation At-A-Glance**

- WAAHSC continues to lead this community-based model;
- The model of evaluation recognized the starting point of the NWTAHS programs;
- The purpose of the evaluation model was for program development, enhancement, strength-building and future planning;
- The Model prioritized early childhood areas: classroom quality and school readiness;
- Provided methodology that would be consistent with peer-reviewed literature;
- Meets the challenges of culturally appropriate assessment;

- The Model was developed with a partnership between NWTAHS, evaluation personnel and policy/government.

The NWT Model of Program Evaluation has evolved from the 1998 timeline of site descriptions to an established model of program evaluation that meets the needs of its AHSUNC communities. The Model has been evolving for use in many of WAAHSC works, such as the 2008 longitudinal study, based on the premise of made in the NWT, for NWT communities, by NWT communities, so as to provide the best possible early childhood program for the children and future leaders. Chapter 2 provided the background development of this model of program evaluation, which was formed from the AHSUNC program, AHSUNC activities and anticipated outcomes from AHSUNC activities.

A common way to outline a program’s link between activities and outcomes is through a logic model, which provides a quick summary, often in one page, of the program, and also provides the source of relevant questions to follow during an evaluation of a program. The WAAHSC has not formally outlined a logic model as such, but, through its discussions and continued work on the evaluation strategy, an activities’ approach logic model can be deduced and is outlined in Table 3-1.

**Figure 3-1 - Draft Logic Model- Northwest Territories Aboriginal Head Start Program**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Immediate Outcomes</th>
<th>Intermediate Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHSUNC Activities-School Readiness</td>
<td>AHSUNC Children Progress over the AHS Year</td>
<td>AHSUNC Children work well in school &amp; for their age</td>
<td>AHSUNC Children complete school</td>
</tr>
</tbody>
</table>

There are different types of logic models, and as the work continues with WAAHSC following the longitudinal evaluation (as described in Chapters 4 & 5) and work with curriculum development (as described in Chapter 6), the use of an activities logic model will be helpful to strengthen the evaluation strategy already in place (Schmitz & Parsons, 1999).
What is a Logic Model?

A logic model is a type of format used in the evaluation field that aims to tell the reader the logic behind a program, organization or other situation in a one page diagram. A logic model’s purpose is to present, in a specified format, the theory or set of assumptions that program proponents have about why the program will work (Schmitz & Parsons, 1999).

In plain language, a logic model is a way of describing a project, and it summarizes in one diagram the activities, outputs and outcomes related to the project. Logic models are being used with great frequency in project evaluations to link program activities with outcomes that are short term, intermediate or long term expectations of the project.

A logic model is a tool to help in planning, evaluation design, implementation, analysis and knowledge generation. The process of developing a model is an opportunity to chart the course of a given project, such as Aboriginal Head Start in the Northwest Territories.

The benefits of using a program logic model are to build a shared understanding of what the program is all about, and how the parts of the program work together. It is also a way to include stakeholders in the design, processes and use of evaluation.
3.2 Additional Literature Support

As the NWTAHS Model of Program Evaluation was used in the NWT and shared among the early childhood audiences at conferences and meetings, discussions began regarding the model. What started as sharing for peer support, ultimately led to insights and highlights from the literature. Below is a selection of points from the literature that provides direction and support for the NWTAHS Model of Program Evaluation.

1) Supporting Aboriginal children, families and communities

In the publication, “Supporting Indigenous Children’s Development (2006)”, Jessica Ball and Alan Pence describe the First Nations Partnership Programs, and the Generative Curriculum Model that evolved from the partnership program. This initiative between the University of Victoria in British Columbia together with First Nations communities and early childhood educators has provided much background, ideas and support for WAAHSC to continue with its approach to program evaluation.

Both initiatives involve strong partnerships, and exist for the benefit and support of Aboriginal children, families and communities. Both approaches build on existing strengths and the desire for meaningful involvement, where traditionally this was not the case. Further, the Generative Curriculum Model supports the emergence of new knowledge that is based on what works in communities, and does not impose western-based theory and old beliefs, unless placed in the circle of dialogue with community-based knowledge.

Other current literature states that there is a need for Aboriginal people to conduct their own research within the early childhood area, as the care of children has been a shared responsibility by the family and the community (Greenwood, 2004; Canadian Council on Learning, 2007). To help children and communities thrive, Aboriginal communities and early childhood educators/staff must ask questions, and find answers, as well as learn from others, and be attentive to how diversity is respected, what is taught and the ways in which it is taught to the next generation of young Aboriginal people (Greenwood, 2004).

2) Recognizing the Diversity of Children and Families

US Head Start literature has been engaged in more and more evaluation and research projects involving diversity of children and families, including different language groups, ethnicity and first and second-generation
immigrant children and families. As US Head Start increasingly caters to American children that do not share the same culture and language as mainstream America, challenges and adaptations are needed to core program performance standards, program components and research and evaluation methodologies (Phillips and White, 2004).

First Nations Partnership Program and Generative Curriculum - Example of Partnerships with First Nations communities and Universities in Early Childhood

Over a timeline of 10 years, the Generative Curriculum Model was developed, put into practice and reviewed for its effectiveness in meeting the needs of First Nations communities in British Columbia. This model of training early childhood educators has been praised for its use of a participatory action approach to enhance the conditions for the children’s well-being and the educators that work with them.

This model of teaching has students actively involved in a process of articulating, comparing and integrating views of early childhood from perspectives in their home communities. The experts in the learning-teaching relationship are the learners that value knowledge and skills from the communities and in turn share mainstream theories, research and practice from Western perspectives. (Ball & Pence, 2006). Teaching is guided by the principles of active and interactive learning and process is valued over product. Answers are not sought for how to encourage children’s development, but discussions and questions of why the child is doing what they are doing.

The power of community is realized through reciprocal learning which relies on the willingness of those from learning institutions to look both ways, to “sitting backwards at our desks” so as to reposition themselves about where the knowledge is (Ball & Pence, 2006).

As well, families are increasingly diverse in economics, employment, composition and gender of parents and non-traditional family units. Local Head Start projects in the US are also multilingual, linked with other community-based services such as childcare programs and schools and are fast becoming innovative in their program design, structure and curriculum.

This diversity of programming and participation provides for new possibilities for research and program evaluation, as well as challenges for researchers and program staff. Many different strategic proposals for innovative research
and evaluation are underway with US Head Start that can only help to guide WAAHSC in the years to come, as they face similar social-cultural changes in their programs.

3) Individual Differences & Intergenerational Culture Transmission

A number of research and cultural anthropologists are looking at how cultural practices impact child development, given that cultural practices are defined as actions that are repeated, shared with others in a social group, and invested with normative expectations and with meanings or significances that go beyond the immediate goals of the action (National Academy of Sciences, 2000). As well, knowledge is increasing about how cultural practices and values are transmitted through different generations, and how parenting approaches and practices account for many of the variations in child outcomes.

The topic of individual differences has always been prevalent in the literature. Biomedical, socio-cultural and humanistic research all deal with the issue of individual differences and what they mean for program development, surveillance/monitoring, research and evaluation. The age-old debate of nature versus nurture, and which is more prominent in the early years is a topic that continues to have strong findings on both sides, with little resolution to which is most important for the field of early childhood.

4) Choice of Tools and Measurements

The choice of data collection tools and measures for the NWTAHS Model of Program Evaluation continues to gain support and disapproval from different perspectives of the current literature. Currently, early childhood researchers seek to obtain observation or naturalistic data on young children through measures such as the Work Sampling System (WSS, 2006) and others. Such authentic assessments, as they are referred to, are time consuming for early childhood staff, and require training and support in observational data collection. Their popularity is in gaining naturalistic data from children, without interfering with their daily activities and/or subjecting them to artificial-type testing environments.

Additional support in the literature and the psychometric tool business highlights the newly released Ages and Stages Questionnaire, which is suited to a greater diversity of groups of children and parents, and is easy to administer for young children up to age 5 years (ASQ, 2009). The Brigance Screens (Brigance, 2009) also released new editions of their school readiness measures in 2009.
There are some suggestions that what is needed are culture-fair or culture-free tools for early childhood evaluation and child surveillance. Accordingly, it has been determined that there is no such measure or tool that could be completely culture-free or culture-fair, which would entail the construction of a measure or tool that contains no factors or elements that favour any one culture, community or group of people.

With respect to selection of tool or instrument, there is no perfect measure or tool for all diverse groups of young children. The literature continues to support the comprehensive review of a desired instrument or measure for use with a particular population and in keeping with the scope of the measure, its intended use and within the context of the evaluation/research design.

5) Ethical Considerations

The NWTAHS Model of Program Evaluation was developed within an ethical framework that was consistent with guidelines and sanctions of established Canadian governing bodies in evaluation and culture-based evaluation. The following guidelines formed the basis of the program evaluation model:


• National Aboriginal Health Organization (NAHO) – Ownership, Control, Access and Possession or OCAP Principles.

The OCAP principles (NAHO, 2007), which refer to Ownership, Capacity, Accountability and Possession are further described here:

Ownership refers to the principle that the Aboriginal community or group owns the information collectively.

Control refers to the principle that communities and representative groups are within their rights in seeking to control all aspects of research and information management process that impact them.

Access refers to the point that groups/communities must have access to information/data about themselves and their communities, regardless of where it is currently held or located.

Possession refers to the mechanism by which ownership can be asserted and protected.
OCAP is a First Nations approach to research and evaluation, including information management. It is a way of saying “yes” to beneficial evaluation work and saying “no” to evaluation work that could be harmful to individuals or communities. The principles are rooted in self-determination and processes of information gathering coming from the people. The OCAP principles were developed to enable all research concerning First Nations to make decisions regarding what research will be done, for what purpose information or data will be used, where the information will be physically stored and who will have access. The work was sanctioned by the First Nations Information Governance Committee (FNIGC) and the First Nations Regional Longitudinal Health Survey (RHS).

In the NWT Model of Program Evaluation, the OCAP principles are integrated throughout the methods, analysis, dissemination and application of the findings from the evaluations completed in 2000-2001, 2003-2004 and most recently in 2008. In addition, key principles of ethical evaluation were incorporated into the model design, such as, procedures for informed consent, outline of benefits and risks, information for parents and families and practices to ensure confidentiality of evaluation participants.

3.3 Challenges and Critiques

In sharing the NWTAHS Model of Program Evaluation with others, a number of challenges and critiques came forward from other perspectives, as well as endorsements from peer reviewers regarding the strength of the evaluation approach. Initially it was difficult to hear critiques of the approach and procedures, but as time progressed it became apparent that the NWTAHS open system of program evaluation could use this feedback to strengthen the evaluation approach in the years to come.

Areas in need of change in the evaluation model were revised and there was greater resolve to maintain areas that were important to WAAHSC. The strength in having an open system of model development and approach to evaluation led the WAAHSC members to gain capacity in areas previously not apparent and to become leaders in the constructive review of the AHSUNC program. WAAHSC members became more informed, knowledgeable and sensitive to the needs of the children, families and communities. Table 3-2 outlines some of the challenges and critiques put forward to WAAHSC regarding their evaluation approach and the response or action taken.
<table>
<thead>
<tr>
<th>Challenge/Critique</th>
<th>WAAHSC Response and Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Measures and tools are not culturally relevant, not valid and not reliable.</td>
<td>Use of measures is culturally relevant, and data is used for program evaluation. Reliability and validity of the measures are stronger than any non-standardized measure, and based on tool research &amp; development, which are well established.</td>
</tr>
<tr>
<td>2. AHSUNC staff are not qualified to administer measures.</td>
<td>Measures chosen are within the range of skills that early childhood educators can use, and training is provided for them to administer the measures.</td>
</tr>
<tr>
<td>3. US literature is not relevant for Aboriginal Head Start.</td>
<td>Aboriginal Head Start shares many similarities and differences with US Head Start. There are few Canadian counterparts that have the same depth of literature, research and evaluation.</td>
</tr>
<tr>
<td>4. New models of evaluation and measures/tools are needed for Aboriginal groups.</td>
<td>Although new models are possible, WAAHSC has chosen to use existing models and tools, and to use them within their own evaluation strategy, questions and with their own people collecting the data.</td>
</tr>
<tr>
<td>5. Measures and tools will discriminate against First Nations children.</td>
<td>Current measures and tools are very different from the ones used in the 1960’s that were used to segregate children from different cultures into special education classes. How the data is used is most relevant, and for WAAHSC the data from the tools was and is used for program enhancement.</td>
</tr>
</tbody>
</table>
3.4 How is the NWTAHS Model Used Today?

The NWTAHS Model of Program Evaluation continues to be used in the NWT as a guide for program evaluation and program development (WAAHSC, 2006; Yellowknives Dene First Nation, 2007). The model was used in the 2008 Longitudinal Evaluation, which is presented in Chapter 4 & 5 of this report, and is currently being used as the basis for the curriculum development project, as discussed in Chapter 6.

In sharing with other jurisdictions across Canada, and into the United States, the NWTAHS Model of Program Evaluation was adapted in 2007 for the Alberta Aboriginal Head Start programs (PHAC & Chalmers & Associates Consulting, 2007 and for the Aboriginal Head Start programs in the Yukon Territory in 2008 and 2009 (Chalmers & Associates Consulting, in press). For each jurisdiction, adjustments were made to training content, timelines and number of data collection points, based on available funding, program capacity at the site level and scheduling of data collection with other program responsibilities.

The NWT Model of Program Evaluation has evolved from the 1998 timeline of starting site-specific reviews of their program to an established model of program evaluation that meets the needs of its AHS communities. In the years to come, there will be ongoing challenges to the details of the Model, but it is hoped that the optimism and community-based control of the Model is maintained and perhaps even strengthened. As program personnel change over at AHSUNC sites, new partners and WAAHSC members are in place. The Model and capacity building is not lost with staff turnover, but carried on with community members to other projects, programs and services.
4  NWT Longitudinal Evaluation - Methodology
4 NWT Longitudinal Evaluation - Methodology

Chapter 4 of this report includes the description of the methodology used for the 2008 longitudinal evaluation with four NWTAHS programs and communities.

4.1 Approach & Design

Longitudinal evaluation designs are based on documenting change over time, therefore, assessing the path of child development of AHSUNC children years after they have attended the program. The NWTAHS programs were well positioned with baseline child outcome data from 2000-2001 and 2003-2004 to complete a longitudinal evaluation in 2008, and which was consistent with the NWT Model of Program Evaluation. The purpose of the 2008 longitudinal evaluation was to conduct a participatory action evaluation of the role of the program on AHSUNC graduates years after they had attended Head Start.

The longitudinal evaluation study was consistent with the methodology of the NWTAHS Model of Program Evaluation (Chapter 3), with its emphasis on a limited number of indicators, adherence to issues of ownership and control of the study by WAAHSC, the use of culturally-sensitive procedures for data collection and adhering to accepted principles of psychometric measurement. The design of the longitudinal study is best described as a quasi-experimental design with a pre/post-test data collection for AHSUNC graduates and cross-sectional comparisons with age-matched peers from their respective classrooms.

There was no randomization of AHSUNC graduates, and furthermore, each student could also act as their own control, based on their initial pre-test data on selected measures. The use of a quasi-experimental design was possible given the foundation work completed with AHSUNC communities, programs and WAAHSC in the evaluation strategy and model development from 2000 through 2008.

Evaluation Questions

The questions for the 2008 longitudinal evaluation of NWTAHS were:

1. What skills and knowledge do NWTAHS children have years after they have attended the program? (longitudinal)

   Do these skills differ from their age-matched peers (cross-sectional)?
2. How do the children’s skills vary across skill and literacy levels in verbal, reading/writing, math and social skills?

3. Are there differences in achievements among NWTAHS children who enter the program with lower or higher skills and knowledge (longitudinal and cross-sectional)?

4. Do the achievements of the AHSUNC children differ among the two cohort groups studied, that is the 2000-2001 and the 2003-2004 groups of AHSUNC graduates in the NWT?

5. Are there differences in the patterns of skills and achievements for AHSUNC graduates based on attending rural or urban AHSUNC programs?

What is a Quasi-Experimental Design?

This type of evaluation design is used for the most part with intact or pre-existing groups of participants (Mertens, 2005). The gold standard in evaluation and research is to randomize participants to either an intervention or a comparison/control group.

Experimental designs with randomization are considered ideal for looking at the impacts of a program or intervention. However, for the most part, to randomly assign children to no-program and others to a program is considered unethical and unjust, and therefore is not routinely done (Mertens, 2005).

Quasi-experimental designs are increasingly popular in evaluation studies of programs and services such as Head Start and others, so as to limit the unfairness in the selection of participants.

The evaluation questions posed for the 2008 longitudinal study of NWTAHS program derived from the initial inquiry made by WAAHSC members to follow their AHSUNC graduates over time, as well as to understand where program enhancements and development are indicated. Many of the questions, as outlined above, follow from the two baseline studies of AHSUNC in NWT communities, in terms of monitoring school readiness skills, language and cognitive development, social skills development, with additional queries based on the communities selected to participate.
4.2 Participants

Participating Schools

The NWTAHS sites and respective schools (K’àlemì Dene School-Ndilo, Mildred Hall Elementary School-Yellowknife, Elizabeth Mackenzie Elementary School-Bechoko, Harry Camsell School-Town of Hay River, Chief Sunrise Education Centre-K’átłodéêche and Deh Gah School-Fort Providence) volunteered for participation in this longitudinal study and follow-up of AHSUNC graduates.

Sample of Participants

The longitudinal evaluation study of AHSUNC in the NWT included a sample of 98 school age children (n = 98) who had previously attended the program from 2000-2001 to 2006-2007. This sample of AHSUNC graduates represented 27% of the original baseline sample from the 2000-2001 and 2003-2004 outcome evaluation studies in the NWT. The comparison group included the NWTAHS children’s age matched peers from the same classrooms and included 133 children (n = 133). No baseline or pre-test data was available for these age-matched peers. As well, cross-sectional comparisons could be made with the norm-referenced sample of children from each measure, and each AHSUNC child’s baseline score could serve as a control.

The total sample for the NWTAHS longitudinal evaluation was 231 children (n = 231) children, that was available for the data collection in January-February of 2008. Table 4-1 summarizes the participants for this study.

Participating Communities in the NWT

Table 4-2 outlines the population breakdown for each of the four participating communities. The sample of NWT communities with AHSUNC programs that participated were ones that completed the necessary administrative procedures, information to parents/guardians and established dates and locations for data collection in the set time periods. The classification of the four participating communities into urban and rural/remote was done based on population numbers, and also based on community access to services and how the communities are perceived within the NWT in terms of larger and smaller centres.
Table 4-1 Longitudinal Study 2008 - Participants

AHSUNC Graduates and Age-Matched Peers for Grades 3 and 6
Yellowknife/Ndilo, Bechokò, Hay River and Fort Providence - 2008

<table>
<thead>
<tr>
<th>AHSUNC Graduates (Gr. 3 &amp; 6)</th>
<th>Age-Matched Peers (Gr.3 &amp; 6)</th>
<th>Total Sample for 2008 (Gr. 3 &amp; 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n= 98</td>
<td>n= 133</td>
<td>n= 231</td>
</tr>
<tr>
<td>Mean Age in Years</td>
<td>9.3 years</td>
<td>9.6 years</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.8 years</td>
<td>2.1 years</td>
</tr>
<tr>
<td>% Girls</td>
<td>45%</td>
<td>49%</td>
</tr>
<tr>
<td>% Boys</td>
<td>55%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Table 4-2 Population Breakdown of Participating AHSUNC Communities for Longitudinal Study 2008-Participants

<table>
<thead>
<tr>
<th>Community</th>
<th>Population*</th>
<th>Urban/Rural or Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowknife/Ndilo</td>
<td>19,000</td>
<td>Small Urban</td>
</tr>
<tr>
<td>Bechokò</td>
<td>2,000</td>
<td>Rural or remote</td>
</tr>
<tr>
<td>Hay River &amp; Reserve</td>
<td>4,000</td>
<td>Small Urban</td>
</tr>
<tr>
<td>Fort Providence</td>
<td>800</td>
<td>Rural or remote</td>
</tr>
</tbody>
</table>

Additional data from the community of Fort McPherson could not be used due to preparation problems with the informed consent process and a lack of time set aside to complete the data collection with the students. This was an unfortunate occurrence, as the Fort McPherson AHSUNC graduates have been followed during two previous data collection timelines, including their Head Start year, Kindergarten and Grade 1, and Grades 3 and 4. The cohort of AHSUNC graduates from Fort McPherson, Chief Julius School, were in Grades 7 and 8 in the winter of 2008, which was the timeline for data collection and the sample collected was inadequate for comparison purposes.

**AHSUNC Program Characteristics**

The AHSUNC program serves four-year-old children in the communities that participated in this longitudinal study, where the children can attend the program from three to five days per week. The language of instruction in all the sites includes English, with the local Aboriginal language being taught as well, where possible, given the resources of each program. In Bechokò, the language of instruction is shared equally with the local Tlicho language and English.

All four AHSUNC programs follow the six core areas of the program: culture and language, education and school readiness, health promotion, nutrition, social support and parental involvement. Program content, delivery and yearly schedules are determined by each AHSUNC program and community. All four AHSUNC programs received ECERS ratings from the two baseline studies, with improvements noted in each program from 2000-2001 to 2003-2004. The Urban programs (Yellowknife/Ndilo and Hay River) had stronger ECERS ratings from the baseline studies, that is, “Good to Excellent” quality, with Bechokò and Fort Providence having “Fair/Minimal to Good” classroom quality (WAAHSC, 2006).

**4.3 Data Collection Measures and Tools**

The selection of instruments for the NWTAHS Longitudinal Study in 2008 was based on the previous baseline studies in 2000-2001 and 2003-2004, and the NWT Model of Program Evaluation (Chapter 2 and 3). As this is the longitudinal follow-up, there was indication to sample children’s literacy/achievement in school and prosocial skills. The choice of data collection measures was deduced from the baseline studies (*Appendix C: Data Collection Measures - Baseline*), and where possible, the same measures were used for the longitudinal study time period, as the measures are developmental in nature, and change with increasing age of the student.
The measures were chosen for the same reasons as in the previous studies with WAAHSC, including relevance to the evaluation questions, proven reliability and validity with children in these settings, ease of administration by program assistants and proven use from the literature. Furthermore, the measures were chosen for cost-effectiveness, limited time needed to collect the information, and their applicability within a participatory action model of evaluation.

The measures used in this longitudinal study were standardized and norm-referenced which use specific procedures for administration and scoring. Norm-referenced measures refers to the application of a range of values that represent the typical performance of a group of children of a certain age for comparison purposes. The measures used for the longitudinal evaluation of AHSUNC in the NWT in 2008 sampled children’s developing literacy, social skills and receptive vocabulary:

1) **Peabody Picture Vocabulary Test or PPVT-IV (Dunn & Dunn, 2006)**: a measure of literacy used in the AHSUNC program and the school data collection.

2) **Wechsler Individual Achievement Test, Abbreviated or WIAT-II-A (Wechsler, 2001)**: a measure of reading, numeracy and word writing used in the school data collection.

3) **Social Skills Rating Scale or SSRS (Gresham and Elliot, 1990)**: a rating scale used by AHSUNC teachers to identify social skills in the AHSUNC program.

The use of standardized assessment measures allowed for comparisons of the skills of NWT AHS children in the sample, with a norm-referenced sample of children. The measures are described here with additional information on each measure in Appendix D: Data Collection Measures-Longitudinal Evaluation.

1) **Peabody Picture Vocabulary Test or PPVT-IV (Dunn & Dunn, 2006)**: a measure of children’s literacy potential through non-verbal measurement.

The Peabody Picture Vocabulary Test or PPVT-IV measures the receptive vocabulary of children and adults through the use of a series of colour pictures. The person selects the picture that best illustrates the meaning of a stimulus word, as spoken by the person administering the measure. The items are arranged in order of increasing difficulty and the measure is untimed and individually administered.
The PPVT-IV was first published in 1959, and continues today as a common measure to assess a wide range of vocabulary and literacy skills from preschool to adult ages. Vocabulary acquisition, even through a non-verbal means such as through the use of the PPVT-IV, is a form of achievement, as it represents the words and word meanings that the person has learned through interaction with the environment, both in and out of school. Vocabulary has long been perceived as being related to cognitive ability, especially language development which includes reading and comprehension (Duncan, Claessens, Huston, Pagani, Engel and Sexton, 2007).

The PPVT-IV was co-normed with the Expressive Vocabulary Test - Second Edition to provide a comprehensive evaluation of both receptive and expressive vocabulary attainment. The PPVT-4 age norms are based on a representative sample of 3,540 people aged 2 years 6 months through 90 years from across all ages, minority groups and geographical areas of North America.

2) Wechsler Individual Achievement Test- II-A or WIAT-II-A (Wechsler, 2001)

The Wechsler Individual Achievement Test (2nd Ed.)-Abbreviated or WIAT-II-A is a brief individually-administered measure for assessing children who are in grades pre-kindergarten through college. The general areas screened in this abbreviated measure include word reading, math calculation and spelling.

The word reading subtest assesses phonological awareness and letter identification skills through identification of rhyming words, beginning and ending sounds, matching sounds and naming the 26 letters of the alphabet. Participants also read aloud from a list of words.

The math calculation subtest includes items that measure early math calculation skills (number recognition/counting) and math calculation skills such as addition, subtraction, multiplication and division of whole numbers, fractions and decimals. The spelling subtest includes items that assess early spelling concepts such as sound-to letter correspondence for vowels, consonants and blends.

The standardization sample consisted of 5,500 individuals from across North America including minority groups. The mean of the measure or standard score is 100, with the highest possible score being 145 (very superior range) and the lowest possible score being 40 (extremely low). Educational and clinical psychologists use the established criteria of 70 and below as indicative of substantial problems that require further assessment and educational support.
3) Social Skills Rating Scale or SSRS (Gresham & Elliott, 1990): a teacher rating scale tool used to identify prosocial behaviours and problem behaviours.

The Social Skills Rating Scale (Gresham and Elliott, 1990) is a broad, multi-rater assessment of student social behaviours that can affect teacher-student relations, peer acceptance and academic performance. The standardized scale with norm-referenced capabilities is designed for use by preschool, elementary and secondary students. The SSRS documents the perceived frequency and importance of behaviours influencing the student’s development and social competence and adaptive functioning at school. Teacher rating forms provide information about a student from the view of their time in the classroom and in the school in the areas of cooperation, assertion, and self-control.

The SSRS emphasizes positive behaviours or prosocial skills and also includes an assessment of problem behaviours and academic competence. The SSRS national norms include a diverse sample (multiracial, non-handicapped, male and female) of more than 4,000 children. Included in this norm sample was 4% of Alaska and Pacific Islanders who are representative of Aboriginal children. The remainder of the norm sample is consistent with national demographics for North America, including the United States and Canada.

The SSRS has excellent reliability, including internal consistency, test-retest and inter-rater agreement. High reliability for the Teacher Form of the SSRS includes an internal coefficient and test-re-test correlations ranging from .82 to .95. The SSRS has excellent content, criterion and construct validity through the representative sampling of the SSRS domains (cooperation, assertion and self-control), and is supported by the standardization of 4,000 students.
Talking, Thinking and Learning During the Early Years.

According to recent research, language learning in young children appears to be similar across cultures, both at the community level, and within different settings. That is, young children in a variety of cultures, follow similar developmental patterns as they learn their respective language (National Research Council, 2000). Preschoolers who speak clearly and communicate their ideas, have been found to be better learners in their later years. Furthermore, as children learn through play, they also develop school readiness skills and ultimately have improved responses to mainstream education in their later years.

As with language learning, children’s early capacities to make sense of the world around them and to learn from their peers, families and communities appear to be relatively robust features of a child’s development. The opportunities to interact with people, to observe physical events or activities and to hear language, reasoning and context in speech appear to provide the basis for thinking and learning. Therefore, early interventions that provide these opportunities for children have been geared to providing infants, toddlers, and preschoolers with these rich learning environments so as to provide the roots of later more complex thinking and reasoning. As well, rich home and community environments can provide this same learning context for young children (National Research Council, 2000; Barnett, 2004).

4.4 Evaluation Procedures

WAAHSC members began the preparations for longitudinal data collection with their respective school by sharing the purpose and outline of procedures, timelines and data collection procedures. This was done in December/2007 through January/2008 following approval from the funding partners, PHAC and WAAHSC, in November of 2008. Thereafter, forms were distributed to each school through the WAAHSC liaison to seek informed consent from each parent/guardian that was participating.

Some schools decided to conduct an implied consent process, where parents were informed of the data collection, and participation in the program evaluation of AHSUNC was part of the school day, as no individual files were kept of individual children’s scores. In other schools, it was decided to inform the parents with the documentation (See Appendix E: Letter to School, Informed Consent and Information Sheet for Parents), and it was up to parents/guardians to withdraw consent, should they choose not to participate. Each school and WAAHSC member was responsible for meeting the informed consent procedures used for participation in their respective school and community.
Data collection for this longitudinal evaluation study was scheduled for three school days at each participating school in January and February of 2008. This timeline was chosen in cooperation with WAAHSC and the schools, in consideration of the least intrusive time for students and teachers. As well, it was considered an ideal timeline, as there were few special events in the schools, or conflicting activities such as report cards/interviews and other community events. School staff members were briefed as to the procedures for data collection, and how it would take place during class time.

A group of three to four students were taken from each classroom at a time, where two students would work with the two assistants, while the other two waited their turn. This format provided for efficient use of time with each assistant, as children varied somewhat in the timelines to complete the tasks. A room in the school was used for data collection, with privacy, but also within arm’s reach to the students’ home classroom. It provided for continued rotation of children and efficient use of time to complete the measures within the allotted timeframe. A few students were distracted by other students working in the same room, while others were encouraged and “competitive” with their peers in completing the tasks. There were no refusals to complete the tasks in all four schools, and a token of thanks was given to each student in the form of a sticker book, eraser and crayons/pens that was age-appropriate.

The help from program and classroom assistants from each school, in addition to WAAHSC members, was a practical and necessary part of the data collection procedures, as these people assisted with the liaison with the school administration and the continuity and transition of participants through each task. The school administrative personnel members were also of assistance to confirm receipt of consents and arrange for space in the schools during data collection timelines.

**Data Analysis**

The analysis of the data collected during the longitudinal study adhered to the ethical and evaluative principles of OCAP and the sanctions of established evaluative and psychological governing bodies. Analysis included the use of statistical software (SPSS version 11) and the data/chart analysis features from Microsoft Excel (2003). Statistical analyses were conducted, where possible, and where the data was free from challenges to validity and proper use of consent procedures. Where there was any question of the applicable use of data for analysis, these were omitted or not completed in keeping with principles of ethical data management. Following the data entry into a non-
identifier code in computer files, all child-related data forms were destroyed according to proper procedures for confidential disposal.

As well, contextual factors and analysis of observational and process findings from the data collection were summarized and included in the findings and discussion section of this report that is Chapter 5: Findings and Discussion.

4.5 Ethical Considerations

A number of ethical considerations were part of the methodology, and of central importance throughout the evaluation timeline, including design, data collection, analysis and report writing.

Use of informed consent was done for all data collection activities; each parent/guardian was given a consent form to complete and had the right to not consent. Participation was completely voluntary (See Appendix E: Letter to School, Informed Consent and Information Sheet for Parents) for copy of consent form used, and information sheets used with the participating schools and for parents/guardians).

Statistical limitations were considered for the measures including specific issues of validity and reliability. Data collection activities were used as outlined by the author(s) of the respective tool. Also, interpretation of all results, including the choice of statistical measurements, was limited due to the concern of threats to validity and the overall quasi-experimental design. Comparisons were made, where possible, which was more limited than initially planned, due to concerns raised by school personnel.

Data collection was conducted by persons with the applicable training and skill for the measures. Child-friendly data collection methods (encouragement, having fun, game-like) were used with the participants. This was done to maximize data collection and to make the experience non-threatening for the participants.

Confidentiality and the identity of children were protected - individual results were not filed in school records. Group results were reported without revealing the identity of the children or families participating. Parents had the right to seek out their individual child’s results. Extreme and abnormal findings were reported to each school’s principal, as part of the process of ethical reporting for children at-risk, with suggestions to seek further assessment. These results were then discarded, as they were more than three standard deviations from the mean, and could not be integrated with the other findings.
Minimizing the possibility of misleading findings - evaluation outcome results may be inconclusive due to methodological problems, reliability issues and threats to external and internal validity. The evaluation team outlined the limitations of the findings in accordance with principles of ethical evaluation.

Assistance from community-based assistants - the involvement of local personnel in data collection/overall assistance ensured the evaluation activities were within a cultural frame of reference for the students who were participating. This participation of local personnel was consistent with the overall approach to evaluation, and is a foundation of the NWT Model of Program Evaluation.

Integration of Ownership, Control, Access and Possession or OCAP Principles - the National Aboriginal Health Organization or NAHO has outlined principles that provide guidance for evaluation studies such as this, and were discussed in Chapter 3 of this report. Specific procedures, in terms of de-briefing with the community schools was done, so as to support local partnerships between the AHSUNC programs and schools.

Ethical Review Process - WAAHSC and the funding partners completed an internal ethical review of the longitudinal study, including review of approach, questions, procedures, data collection, informed consent procedures and timelines and locations for data collection. As the AHSUNC program is required to complete evaluation activities, and the NWT Model of Program Evaluation is community-based and has the participation of all respective communities, it was deemed not to be consistent with original research that would be subject to a research license with the Aurora Research Institute/Government of the Northwest Territories. Also, it was further acknowledged that WAAHSC supports “OCAP” and, as such, does not seek approval from the Aurora Research Institute.

Sharing of Findings with WAAHSC - The findings of the longitudinal study were first shared in brief with WAAHSC, followed by further in-depth discussion of the findings, and how to share with interested partners and interested groups. Although time consuming, this sharing of findings with WAAHSC, prior to public release was part of the incorporation of OCAP.
4.6 Limitations of the Methodology

There are limitations in the methodology and interpretation of the findings for this longitudinal study with NWTAHS in 2008. Firstly, the data collection was limited to the participating NWT communities, which were from the southern part of the territory - Yellowknife/Ndilo, Bechokò, Hay River and Fort Providence. Secondly, sampling issues, as well as the use of abbreviated measures limited the amount of data that was collected. There were also problems with getting participants due to problems with forms not being returned to school from parents, and lack of time to complete the informed consent process. Three schools out of four worked diligently with the evaluation team to share with parents the process for data collection, and to seek informed consent. In one community, Fort McPherson, no data could be used due to problems with data collection work-up.

There were some parents who did not give consent for participation due to the “concern of having their child diagnosed”, which suggests a misunderstanding of the evaluation project. For the most part, lead time for data collection preparation was six to eight weeks, and over the Christmas holidays. In working with schools, a year’s advance notice was suggested as an applicable timeline. Also, there were problems in one school, where program evaluation was confused with psychological assessment and diagnosis. This communication problem between AHSUNC and school personnel led to a delay in analyzing the data for the one school, which, in turn, led to a delay in the completion of the overall analysis and final report. Overall, more lead time is needed in working with school personnel, so as to provide orientation to evaluation methodology and ethical procedures.

Thirdly, the measures used in this longitudinal study were norm-referenced with North Americans, which are inclusive of Native Americans. No equivalent measures such as the PPVT-IV or the Brigance Screens have been developed solely for the Canadian population. In fact, there are few measures in all areas of psychometrics that are Canadian in education and psychology, with some newer editions of tools now providing Canadian norm statistics. For the most part, Canadian norms have been very close to American norms, and actually reveal stronger results for Canadians who complete the measures, as compared to their American counterparts. The differences are statistically negligible and it is up to the evaluation or research project to determine which norm sample to use.
Extreme weather (extreme cold temperatures for a three week period) during the data collection timeline of January-February/2008 was experienced with school closings and students unable to get to school. This reduced the sample size from a projected $n=400$ to the final sample size of $n=231$. Lastly, other limitations include evaluation factors such as attribution of causality, lack of randomization, participant variables such as family income, composition of family and other individual differences were not controlled for in this quasi-experimental design and could influence the findings.

Despite these limitations, this longitudinal study has provided WAAHSC and the NWTAHS programs with information for future program enhancement and development.
5 NWTAHS Longitudinal Evaluation- Findings and Discussion
5  NWTAHS Longitudinal Evaluation- Findings and Discussion

Chapter 5 includes the presentation of the findings from the 2008 longitudinal evaluation of AHSUNC graduates in the NWT as well as discussion of the implications of the findings. This chapter includes a number of technical and statistical terms, and the reader is encouraged to refer to Appendix A: List of Terms and Abbreviations.

5.1  Findings

*AHSUNC and Receptive Vocabulary*

Both AHSUNC graduates and their age-matched peers scored in the 21st to 25th percentile on the receptive vocabulary measure (PPVT-IV) in 2008. Also, there were no significant differences between the two groups (p=.09); n =231. Both groups scored within the average range for receptive vocabulary, a measure of verbal skills, as compared to a norm-referenced sample of children of the same age (See Table 5-1).

*AHSUNC and School Work Achievement*

Both AHSUNC graduates and their age-matched peers scored in the 8th to 16th percentile on the school achievement measures in 2008. Also, there were no significant differences between the two sample groups for WIAT-Reading (p=.18), WIAT-Numerical Operations (p=.17) and WIAT- Word writing (p=.57); n=231. In comparison to the norm-referenced sample, these scores were low-average and below the expected range (See Table 5-1).
The longitudinal follow-up of a sub-group of AHSUNC graduates in 2008 was limited to a sample of grade three children (n=18) who were available for assessment in 2008. Based on the follow-up of this sample, the AHSUNC graduates in grade three showed a consistent level of verbal skills as measured on the PPVT-IV (27th percentile in 2004 and 28th percentile in 2008). Both the 2004 and 2008 scores were within the low-average range, as compared to the norm-referenced sample. Therefore, AHSUNC graduates maintained their progress and/or gains made during the AHS program year.

A sample of AHSUNC graduates from the 2000-2001 timeline through to 2008 (n=21) followed a similar pattern of maintenance of their cognitive skills (66th percentile in 2001 and 23rd percentile in 2008). Both the 2001 and 2008 scores were within the average to low-average range, as compared to the norm-referenced sample.
Cross-Sectional Comparison of AHS Graduates and Grade Level Differences

Results in one NWTAHS community revealed similar receptive vocabulary (PPVT-IV) and school achievement scores (WIAT-II) for AHSUNC graduates in grades one to three, as compared to AHSUNC graduates in grades five and six (See Table 5-2). That is, there were no between-group differences found across all grade levels (verbal ability scores \( p=.59 \)).

Table 5-2

<table>
<thead>
<tr>
<th>Grade</th>
<th>PPVT-IV</th>
<th>WIAT-Reading</th>
<th>WIAT-Math</th>
<th>WIAT-Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>6</td>
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</tbody>
</table>

NWTAHS Graduates- \( n = 45 \)
Cross-Sectional Comparison of AHSUNC Graduates and Gender Differences

Gender differences were looked at from a cross-sectional perspective (See Table 5-3). Within the AHSUNC graduate group in 2008 for all grade levels, the girls approached the level of significance for Word Writing (p= .05), that is, AHSUNC girls could write more words than AHSUNC boys, as outlined in the measure. There were no significant differences between AHSUNC boys and AHSUNC girls on the PPVT-IV (p=.54), WIAT-Reading (p=.15) and WIAT-Math (p=.35).

Table 5-3

<table>
<thead>
<tr>
<th>Test</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPVT-IV</td>
<td></td>
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<tr>
<td>WIAT-Reading</td>
<td></td>
<td></td>
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<tr>
<td>WIAT-Math</td>
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<tr>
<td>WIAT-Word</td>
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</tbody>
</table>

AHS Graduates- n = 45
AHS Graduates- Girls- n = 28
AHS Graduates- Boys- n = 17
Cross-Sectional Comparison of AHS Graduates and Urban/Rural or Remote Community Differences

Stronger scores in receptive vocabulary/verbal skills were found between the AHS graduates who attended urban AHS programs as compared to those graduates who attended rural/remote programs in the NWT.

A similar pattern was evident for the age-matched peer group, as receptive vocabulary skills were significantly higher in the urban centres as compared to the rural/remote communities (See Table 5-4).

Table 5-4

Variations in the classroom quality measure, the ECERS-R ratings, in 2000-2001 and 2003-2004, may be contributing to the urban/remote differences, in addition to other issues not studied or controlled for here, such as socio-economic and demographic differences. Caution is indicated in the interpretation of this finding, due to methodology limitations.

Other Findings - Social Skills and Comparison to FACES (2000)

Social Skills data, as measured by the SSRS, was collected in one NWTAHS community (n=39). Classroom teachers completed the rating scale, as did teachers for the AHSUNC students in 2000-2001 and 2003-2004.

Both AHSUNC graduates, including boys and girls, scored within the average range, as compared to the norm-referenced sample in 2008. These
results were consistent with the Social Skills ratings from baseline in 2000-2001 and 2003-2004, and indicate a good level of prosocial skill functioning.

The Head Start Family and Child Experiences Survey or FACES collects data on a nationally representative sample of American Head Start programs (ACY, 2003). The results for a 2003 cohort of Head Start children showed a pattern of progress in receptive vocabulary from the Head Start program through to the early elementary grades. In comparison, the NWTAHS scores on the same measure, revealed a consistent pattern from the AHS program year through to their elementary school grades, and with no further increases in scores in their early school years.

5.2 Discussion

As a first multi-site longitudinal study of AHSUNC graduates in the NWT, WAAHSC and the participating communities can be proud of their hard work and accomplishment. The completion of this study provides the NWTAHS sites with the capacity to report on program outcomes that are beyond the short term. As well, the procedures used in the baseline studies and in 2008, allow for continued measurement and follow-up with additional cohorts of AHSUNC graduates. The methodology used here continues to be well received in the NWT due to its basis in the early childhood literature (Downs, & Strand, 2006) and its relevance to the interests of NWTAHS program staff and managers.

The findings reported here in 2008 are consistent with similar studies (Barnett, 2004) of a longitudinal nature and early childhood programs. AHSUNC graduates in the NWT are “holding their own”, when it comes to school achievement and verbal abilities, as compared to their age-matched peers.

There remain many areas to study including the effect of program duration, age of entry into the program (three or four year old program), the use of curriculum and other factors that influence the growth and development of young children. As well, the findings provide sufficient evidence, along with baseline evaluation information, to further enhance language and cognitive skill development and child-centered learning.

Training suggestions have also come forward throughout the longitudinal study timeline, especially in terms of developing AHSUNC programs that support school readiness within a culturally-relevant frame throughout the entire year of programming. Therefore, it is reasonable to conclude that the findings from this 2008 study are encouraging for the WAAHSC, and can assist the local sites in each respective NWT community with continued program enhancements, curriculum development work and applicable staff training.
Preschool Assessments and How They Can be Used

The use of preschool assessment tools or measures can be used for different reasons, and are being used more frequently for determining eligibility for special programs or services, for risk assessment purposes and as part of the monitoring of early intervention program evaluation (Nagle, 2007). The purposes of preschool assessment are described here.

1) Screening of Preschoolers

This screening involves the evaluation of large groups of children with brief, low-cost procedures to identify those children who may need further diagnostic assessment to qualify for early intervention services (Nagle, 2007). Health surveillance projects often include screening all newborns and young children for health policy, public health and other population health reasons. Information from surveillance and screening is often used for decision making, intervention and monitoring of trends.

2) Diagnosis of Preschoolers

Involves the assessment of children identified as having a potential concern that was previously assessed in a health or education setting. This assessment often includes a broad range of methods of assessment from multiple perspectives, including medical, social and psychoeducational resource persons and specialists.

3) Individual Program Monitoring

This type of assessment includes ongoing individual monitoring with identified children with a diagnosis or specific need. The use of preschool measures provide for monitoring over time of the impact of the individual child and the designated treatment or individual education plan.

4) Program Evaluation

Use of preschool assessment measures and procedures can be used as part of a process to determine the quality of a program, implementation or for program planning purposes. Information gathered from these preschool assessments is used for future decision making, program enhancements and for staff training. Often, child related data gathered for program evaluation is grouped and is not used for any type of individual child programming, diagnosis or intervention.
To Test or Not to Test…

The findings from the 2008 longitudinal study are encouraging with respect to the children’s progress but it is evident that more work is needed to have AHSUNC meet its full potential. The question of whether to test or not to test, was raised in part, through the longitudinal study.

The debate continues about the appropriate use of tests, but the NWTAHS work from 2000 through 2008 has identified the learning and program needs of Aboriginal children, who remain just below their age-matched peers. It would seem that the use of tests can help to advocate for appropriate program interventions and continued support for programs such as AHSUNC. Critics will continue to present opposing views that see the use of such tests, as used in the longitudinal evaluation, as discriminatory and not applicable for Aboriginal children. One fact remains, regardless of the use of tests, Aboriginal children are in need of programming supports before they reach mainstream schools in urban, remote and rural communities.

Longitudinal Evaluation Study - Successes and Challenges

The implementation of the 2008 evaluation study of AHSUNC in the NWT was successful in gaining longitudinal and cross-sectional data from four NWTAHS communities. The methodology used here was well received by the AHSUNC graduates and their age-matched peers, with no adverse effects reported with the students in any of the participating schools. Most of the NWTAHS sites completed necessary liaison work with their community schools, so as to complete consent procedures as indicated by each school. There were some challenges in completing the data collection to maximize sample sizes due to the severe weather at the end of January/2008. As well, there were communication challenges with school personnel, who were unfamiliar with program evaluation methodologies and the use of standardized measurements for other reasons beyond diagnostic and special needs assessment. The allowance of sufficient time in the planning, implementation and de-briefing of the NWTAHS evaluation study would address many of these challenges.

Generally, there was keen interest in the 2008 longitudinal study with AHSUNC graduates within each participating school and community, and especially among WAAHSC members who had started with the evaluation strategy in 2000.
6 Using Evaluation Findings in Curriculum Development
Chapter 6 of this report includes an overview of the application of the longitudinal evaluation that took place in 2008 in terms of the development of a NWTAHS curriculum.

6.1 Curriculum Development

Purpose of the Curriculum Project

Over the last 10 years, a series of process, outcome and longitudinal evaluation projects have provided the necessary program information to support the development of a comprehensive curriculum for NWTAHS programs. The teachers and managers from the AHSUNC sites need, and have requested, a simple, easy to follow manual and curriculum that is based on the local culture and traditions and which meets the educational, physical, social-emotional and spiritual needs of the young children in their programs.

The purpose of the curriculum project is to develop and create an accessible curriculum that can be used in the Aboriginal Head Start (AHSUNC) programs located in the NWT and to share with other early childhood programs across Canada. Currently, there are few curriculum documents that are suited to the needs of the Aboriginal Head Start programs in isolated, remote and urban NWT communities. As well, in the 1990’s established curriculums for early childhood programs, such as High Scope (High/Scope Educational Research Foundation, 1992) and others were found to be not applicable to the community settings. Through meetings over the last year, a number of key guiding principles have come about from the WAAHSC teachers, coordinators and evaluation personnel.

Curriculum Project Goals and Objectives

1) To consult with the teachers and managers of Aboriginal Head Start in order to establish guidelines as to their needs for a curriculum and teacher’s manual. Also, to consult with other experienced early childhood professionals to select relevant developmental information that is culturally-relevant and applicable.

2) To incorporate principles of child development and current best practices in the field of early intervention, as directed by the WAAHSC evaluation work.
3) To design an effective and practical Aboriginal Head Start curriculum and teacher’s manual for the NWT sites.

4) To pilot the newly created curriculum and teacher’s manual.

5) To make revisions, where needed, so as to create a user friendly curriculum document that is community-based.

### What are the Features of an Early Childhood Curriculum?

Curriculum can be defined in different ways depending on the perspective, theory and intended purpose of the document. Broadly, curriculum is defined as the content of what is taught. Curriculum is different but closely linked to learning theories, models of instruction and what can be learned (Kagan and Kauerz, 2006).

“Children learn through play” is the foundation for early childhood education and curriculum development that is referred to as child-centered learning. Furthermore, “children learn through play” has been found to be the basis of how young children learn around the world, and in diverse cultures, communities and settings (Shipley, 1998).

### 6.2 Approach and Priorities for Curriculum Development

Following the discussion of the findings from the longitudinal evaluation with AHSUNC graduates in the NWT in 2008, WAAHSC decided to proceed with an approach to curriculum development that is consistent with the NWTAHS Model of Program Evaluation. Throughout the development of the model, in terms of its use of partnerships, shared knowledge and consideration of the North American literature on early childhood programs, curriculum development has been suggested.

The approach taken with the WAAHSC Curriculum Project has been one of collaboration, consultation, ownership and was consistent with the values and traditions of the participating Aboriginal groups. This process of consultation and ownership has been referred to in the literature as a participatory action approach which includes the participants and/or interested persons in all aspects of the project design, which in this case is the NWTAHS curriculum. As well, cultural considerations are at the forefront, throughout all discussions and work of the curriculum project.
To date, three consultation meetings have been held in from May/2008 through November/2009 with WAAHSC to link findings from the previous evaluation studies and the most recent longitudinal evaluation study with AHSUNC graduates. These meetings have led to sharing of lesson plans, cultural and language activities, and listing of the needs for curriculum content in all areas of an early childhood program for program staff, managers and program stakeholders in the communities.

Priority Areas for Curriculum Development

A literature review is underway to address core areas of curriculum development:

- Head Start and early childhood curricula;
- Aboriginal-based curricula and NWT Dene Education documents;
- Early childhood development resources;
- Social skills for young children;
- Language instruction;
- Cognitive instruction - thinking, planning, executive planning, learning;
- Childcare programming resources;
- Parenting resources.

From the evaluation studies from 2000-2008, and input from WAAHSC, four priority areas have been identified for the work on the curriculum:

1) Language Development - communication, emerging literacy, vocabulary development;

2) Thinking and Cognitive Skills - includes math, discovery/science, patterns, cause and effect, problem solving, information, and “learning to learn”

3) Health & Physical Development - gross/fine motor play, health and nutrition;

4) Social-Emotional development - includes relationships with self, others, basic emotions, awareness of others, expression of self, use of creativity in music, art, dance or play.
A number of questions have been asked and will be addressed throughout the next year of work on the NWT curriculum including dealing with different levels of development, working with children with limited language skills, timelines for the introduction of certain skills such as writing, and other program specific questions. As with previous evaluation work with WAAHSC, a forum of open sharing of community-based knowledge has been encouraged, along with supportive information from existing curriculum documents.

6.3 Timelines and Pilot Testing

During the 2009-2010 fiscal year, WAAHSC will be completing monthly drafts of the NWTAHS Curriculum, and will attempt, where possible, to pilot the draft modules in NWTAHS programs. A winter intensive session is tentatively planned to complete the draft curriculum for part of the year, so as to seek community input, and assistance from local resource persons.

A monthly workplan has been drafted to guide the project, along with a working schematic of the foundational work behind the curriculum. As well, detailed notes have been kept of the curriculum development sessions from each meeting, together with all suggestions and ideas that have come forward as WAAHSC members meet.

The estimated timeline for completion of the draft curriculum is the end of 2010.
7 What is Next?
7 What is Next?

Chapter 7 is the last section of this report and includes thoughts on developing early childhood capacity and final comments.

7.1 Strengthening of Indigenous Early Childhood Capacity

The field of early childhood in Aboriginal communities is being strengthened through many community-based programs and initiatives that have “turned the world upside down” (Ball & Pence, 2006). The AHSUNC program in the NWT, along with other promising initiatives, has taken the steps to empower their programs through learning about what works in their programs and what needs further development. The further grounding of the program, and its monitoring and evaluation in culture and community has provided the foundation for building on each initiative that is leading to relevant and community-based programs for children and families.

It has been said, that the strengthening of Indigenous early childhood program capacity leaves the tracks for the next generation of early childhood educators, program managers, training leaders and instructors. A developmental perspective to program growth, development and strength came from the WAAHSC members who had a vision of what they wanted to find out over a span of 8 to 10 years. The news was mixed, and for WAAHSC, the findings that were strong and empowering provided evidence to continue to use program evaluation as a means to support program strength and development. Where the findings were less than expected, this does not mean failure, but that WAAHSC succeeded in knowing where to address future programming efforts.

Developing capacity in early childhood has occurred through evaluation and now in curriculum development, and all within a short window, and with resource pressures and other challenges that are part of early childhood programs in NWT community settings. Sustaining capacity can occur in the years to come with the sharing of learning with others, working with one’s critiques, and training the next generation of early childhood educators. Leadership is part of the task of building and sustaining this capacity that has been developed in early childhood in the NWT, so as to maintain what has been learned and to apply this learning with the children and in the community. It is easy to become complacent about the enhancements that are needed and this will be the challenge for WAAHSC in the years to come, in addition to other competing agendas within the field of early childhood education.
Priorities for the next decade of the NWTAHS program have yet to be shared, but will most certainly involve the continuation of strong partnerships, belief in the children and communities, and the desire to respect the past and look to the future.

7.2 Final Comments

The final comments in this report belong to WAAHSC members, and others who share the hopes for a better future for Aboriginal children, families and communities.

“I want to have the best possible program for our children.”

(AHS program manager, Ndilo program)

“I want to have a strong program in English and Slavey for the children of Hay River, and the ECERS helped me to know what to program for the children.”

(AHS program staff, Hay River)

“Out of this evaluation work, I would like to see a curriculum for our programs that is based on NWT experiences. This would help with the teachers in our program.”

(AHS program coordinator, Fort Providence)

“I want to do something to show the parents what we are doing with the children.”

(AHS program staff, Fort McPherson)

“Now I understand how to help our children who are advanced for their age; usually I let them help the others, and now I know that I can set up areas to challenge them.”

(AHS program staff, Fort Smith)

“We were part of the first round of evaluation and it helped us to be proud of what we do with our program for our community.”

(AHS program staff, Paulatuk)

“Being part of the group and learning from how others has been helpful.”

(AHS program staff, Inuvik)
Hope for the Future

“The destiny of a people is intricately bound to the way its children are educated. Education not only bears on the economic well-being of a people and a nation, but provides resources for attacking poverty, social exclusion and poor health, while also expanding the range of human choice.

While the seeds planted today will not bear fruit immediately, they should bloom in succeeding years to provide greater opportunities and more potential for fulfillment of hopes and aspirations of future indigenous generations.”

(From Dances with Dependency: Indigenous Success through Self-Reliance by C. Helin, 2006)
Appendix A

List of Terms and Abbreviations
**AHSUNC and AHS:** short form or acronym for Aboriginal Head Start in Urban and Northern Communities. In this report, AHS is also intended to refer to the Aboriginal Head Start in Urban and Northern Communities program, as distinguished from AHSOR or Aboriginal Head Start On Reserve program.

**Bias:** A tendency to produce erroneous or misleading conclusions because of the use of data that are incomplete or drawn from a sample not representative of the group studied.

**Comparison Group:** In evaluation, an aggregate of participants reasonably similar in characteristics to an experimental group before the start of the evaluation procedures that is subjected to the same research conditions as the experimental group except for one aspect or variable being measured.

**Control Group:** In evaluation, an aggregate of participants reasonably similar in characteristics to an experimental or intervention group before the start of the evaluation procedures that is subjected to the same research conditions as the experimental group except for one aspect or variable being measured.

**Cost-Benefit Analysis:** In evaluation research, an attempt to compare costs and benefits of a program by translating these into currency amounts and comparing them.

**Cross-sectional:** An evaluation design or data collection in which groups of individuals or groups are compared at the same moment in time.

**Culture:** A shared pattern of attitudes, beliefs, customs, manners, values, behaviours and self-definitions, role definitions, norms and values that can be found in a given society.

**Evaluation:** In this report, evaluation is defined as a type of periodic inquiry or assessment of the relevance, performance, efficiency, and impact (both expected and unexpected) of the project in relation to stated objectives, program guidelines or activities. It is an approach to learning that can be fully integrated with an organization’s practice and that often leads to program development, adaptation, decision-making and/or enhancement.

**Experimental (intervention group):** A system of investigation usually based on a design and carried out under controlled conditions with the aim of testing a hypothesis and establishing a causal relationship between independent and dependant variables.
**Impact Evaluation (Impact Analysis):** In evaluation, determining the effects of a program designed to produce some type of goods and service, measured in terms of success or failure in achieving the goals or objectives established before the program was implemented.

**Longitudinal Study:** Evaluation or research concerned with changes occurring in individuals or groups over extended periods of time.

**Methodology:** The analysis and systematic application of procedures used in evaluation or research.

**Measure or instrument:** Any tool or device that used in measuring, recording or testing.

**Non-experimental:** Evaluation and/or descriptive research not designed as a controlled experiment, therefore, not justifying causal conclusions. Examples include causal observation, archival research, and surveys.

**Norm-Referenced:** A standard or range of values representing the typical performance of a group, or of a child of a certain age, against which comparisons can be made.

**NWTAHS:** Acronym for Northwest Territories Aboriginal Head Start.

**Outcome:** In evaluation/research, a process to decide whether the program achieved its stated goals. A randomized, controlled experimental model is the ideal model generally agreed upon for evaluating the effectiveness of a program outcome.

**PHAC:** Short form or acronym for Public Health Agency of Canada.

**Pre-Test/Post-Test:** An examination given at the beginning (pre-test) and end of any procedure (post-test), for example, students registering for a course were given a pretest; after completing the course they were given a post-test to measure whether they had gained any knowledge, and, if so, how much per group and per individual.

**Process Evaluation:** In evaluation research, an in-house function in which the evaluator quickly moves into the situation to be evaluated, conducts the evaluation, feeds back findings to the program administrator for immediate program modification.
**Program Evaluation:** The field of inquiry that tries to describe or measure the extent to which a program is meeting its goals; examines the design and implementation of a program an changes due to program participation.

**Qualitative (data):** Used in evaluation and research to refer to a specific type of data collection and analysis reflecting the fact that human experience cannot be quantified.

**Quantitative (data):** Events assigned certain well-defined, discrete, numerical values for the purpose of data analysis and/or statistical processing.

**Quasi–Experimental model:** Evaluation/research with intact groups, in which random assignments to experimental/control conditions to reduce the influence of bias is not possible.

**Randomized or Random Group Design:** An experimental design based on subjects being assigned by chance to a condition.

**Reliability:** A measure of the degree of consistency of sets of variables, such as surveys, instruments or measures.

**Research:** is one of many different ways of knowing or understanding which uses a systematic inquiry that is designed to collect, analyze, interpret, and use data to understand, describe, predict or control a phenomenon. The exact definition is determined by the theoretical framework of the researcher.

**Social Skills (prosocial skills):** Any act, deed, or behavioural pattern that is socially constructive or in some way beneficial or positive to another person or group.

**Standardized Test:** A measure whose validity and reliability have been established by thorough cumulative empirical applications and analysis and which has clearly defined characteristics and instructions for administration and scoring.

**OCAP (Ownership, Control, Access, Possession):** Refers to the four principles of ownership, control, access and possession, as defined by the National Aboriginal Health Organization.

**Surveillance:** Systematic collection, analysis and interpretation of a given issue, such as health conditions, which is then used to drive decisions about policy. Usually involves broad collection of statistics for population groups or sub-groups.
**Survey Method/Research:** A technique using questionnaires or personal interviews to discover the attitudes and beliefs of a given population or group. Variables must be controlled including experimenter bias, sampling procedures, interview format, and question-wording.

**Validity:** In statistics and research, the ability of an instrument to measure what it is supposed to measure. A measure can be highly reliable but not valid.

**WAAHSC:** Acronym for Western Arctic Aboriginal Head Start Council.
Appendix B

History of NWTAHS - 1995 to 2009
Historical Timeline of Events for AHSUNC in the NWT


“Early intervention at a preschool age gives children good self-esteem, a desire for learning and opportunities to develop fully as young people.”

(The Honourable Diane Marleau, 1995)

1995 - Proposal Development AHSUNC.

1996 - Fall - AHSUNC Project Contribution and Agreements signed.

1996 - November- Meeting of NWT sites in Yellowknife- Explorer Hotel, tour of 4+ program, administration meeting, all projects from NWT (prior to division of NWT into two Territories, so eastern Arctic AHSUNC programs attended as well). Programs at the meeting included Paulatuk, Fort McPherson, Fort Providence, Hay River, Ndilo and Fort Smith.

1996-97 - Program start-up- Equipment purchase, management structures, space and classroom management, staff hiring. Programs start winter and spring of 1997.

1998 - Fort Smith comes into full operation after location change.

1998 - Terms of Reference were developed for the Western Arctic Aboriginal Head Start Council (WAAHSC).

1998 - Process Evaluation/Surveys started by National AHSUNC Office; process survey includes information of program participants, attendance, program administration and financial information, and program needs.

1998 - Descriptive/Process Evaluation of NWT and Nunavut Projects.

1999 - Bechokò (formerly Rae-Edzo) becomes the seventh AHSUNC site to open its doors in the NWT.
2000 - External evaluation consultant hired from Chalmers & Associates Consulting Ltd. to assist WAAHSC with outcome evaluation.

2000 - Fall- Site visits to all NWT sites for training in data collection (school readiness) and ECERS site observations.

First Pre-test completed for school readiness measures - Brigance Preschool Screen and Social Skills Ratings.

2001 - Spring Post-test completed for school readiness measures - Brigance Preschool Screen and Social Skills Ratings.


2002 - November- Poster Presentation at AHSUNC National Training Workshop, Ottawa, Ontario of 2000-2001 Pilot Evaluation of NWTAHS.

2003 - Phase 2 of data collection starts with NWTAHS sites completing Pre/Post test of school readiness measure and program quality (ECERS-R).

2004 - Eighth AHSUNC site opens its doors in the community of Inuvik, NWT.


2004 - December- NWTAHS evaluation team members participate in roundtable discussion sponsored by the Centre for Excellence for Children with Special Needs, Winnipeg, Manitoba.

2007 - February 14 - WAAHSC released their Booklet: “10 Years of Aboriginal Head Start in the NWT: 1996 to 2006”, a 74 page publication of the NWTAHS sites and program evaluation from 2001-2006, at the Legislative Assembly Building, Yellowknife, NWT.
2007 - Summary of NWTAHS findings in “Reaching for the Top: A Report by the Advisor on Healthy Children and Youth”. Report by Dr. K. Kellie Leitch.

2007 - Citation of WAAHSC pilot follow-up study in “Ensuring the Best Start in Life; Targeting versus Universality in Early Childhood Development.” Dr. Gillian Doherty for the Institute for Research on Public Policy.

2008 - Yellowknives Dene First Nation release their booklet: “Empowering our Children’s Futures: The First 10 Years of Aboriginal Head Start in Yellowknife and Ndilo”, a 142 page publication of the Yellowknife/Ndilo program- Done-Necha- lia Gha Enit’ e Ko.

2008 - May 21-22 WAAHSC Meeting in Yellowknife to discuss upcoming proceedings in Washington and initial discussion of curriculum work for 2008-2009 fiscal year.


2008 - June - Citation of 2001 and 2004 evaluation studies in “Promoting Equity and Dignity for Aboriginal Children in Canada”, Dr. Jessica Ball for the Institute for Research on Public Policy.

2008 - November 13-14, 2008 Longitudinal Findings De-briefing & Curriculum Planning meeting in Yellowknife, NWT.

2009 - January 27-29, 209 WAAHSC meeting for continuation of curriculum work - Outline of tasks, priority areas, format, direction from longitudinal evaluation and other NWT evaluation work. Presentation of culture-based program lessons and activities completed at each site to guide the ongoing curriculum work.
2009 - February 11, 2009 - Presentation of Executive Summary of NWT Longitudinal Findings to NAHSC and AHSUNC program consultants and Evaluator’s network, Winnipeg, Manitoba.

2009 - April 27-30, 2009 - WAAHSC meeting in Hay River to continue Curriculum Project Work - Working group completes thematic content, core areas of curriculum, content in four core areas (social-emotional, physical development, cognitive and language activities). Cultural content is the overarching theme of the curriculum.

Appendix C

Data Collection Measures
- Baseline
Early Childhood Environment Rating Scale (Revised Edition) - ECERS

**Author & Year:** Harms, T., Clifford, R.M., and Cryer, D.,

**Publisher:** Revised edition 1998 Teachers College Press

**Age:** For all early childhood programs (including culture-specific programs for children ages 2 to 6 years)

**Time needed:** Two three hour classroom observation time schedules

**Training needed:** Knowledge of early childhood & qualitative documentation

**Materials:** ECERS material, early childhood classroom, plain paper

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**What the instruments tells us?**

- Samples the classroom quality of an early childhood program.

- 37 areas are grouped in seven areas: Space and Furnishings, Personal Care Routines, Language-reasoning, Child Activities, Teacher-Child interaction, Program structure, parental involvement and staff and management issues.

- Can provide classroom quality ratings, and information for program improvement and enhancement.

**How does this instrument work?**

- Ratings are through observation and scored as follows- inadequate quality, minimal, average, good and excellent quality.

- Ratings are done through the view point of the examiner.

- Section scores are added up and ECERS total scores are used for reporting, quality purposes and evaluation monitoring.
Comments:

The ECERS classroom quality measure has become a consistent measure for many early childhood programs such as Head Start. As a qualitative tool, it provides feedback on classroom quality, development as well as being culturally sensitive and relevant for work with AHSUNC. It has been used in other Canadian AHSUNC programs since 2000.
Brigance Preschool Screen


Publisher: Curriculum Associates

Age: 3 & 4 year-old children (Screens available for other ages)

Time needed: 15 minutes, children interviewed by teacher or evaluator

Training needed: Knowledge of early childhood & screening procedures

Materials: Screen, scoring sheet, plain paper, crayons, open space

What the instruments tells us?

- Samples children’s skills in a broad range of areas including fine and gross motor, language, general knowledge and school readiness skills.

- Gives tables to compare children to a norm-referenced sample.

- Provides information about children with possible language and learning problems and children with possible academic talent.

- Can provide information about growth and development over time.

How does this instrument work?

- The child is asked to perform some tasks that are typical of most preschool programs; the screening book outlines all the questions for the interviewer. A score is tallied after the tool is completed.

Comments:

The Brigance Screens are clear, easy to use and provide information about children’s development in a timely and fun manner for the child. The research on the Brigance screens is well documented and provides good statistical features (test-retest, inter-rater and internal consistency). The Brigance Screens can be used for children from age 2 to 7 years and provide a good overview of the child’s development over time. Also, the Brigance materials have been used in some NWT and Nunavut schools.
Social Skills Rating Scale (SSRS-Preschool Form)

Author & Year: Gresham, F.M. and Elliott, S.N., 1990


Age: For children 3 to 18 yrs, teacher completes the scale

Time needed: 10-20 minutes

Training needed: Training of the scale; analysis done by evaluation consultants trained in psychometrics and interpretation

Materials: Scale and quiet area

What the instrument tells us about children:

- The scale emphasizes positive behaviours or prosocial skills that are related to academic functioning. Behaviours include: sharing, helping, and relationships.

- Samples children’s skills in three areas of social skill development: social skills, problem behaviours and academic competence.

- Gives norm referenced values to compare children to other children; national norms include multiracial, delayed, disabled and male/female children.

How does the instrument work?

- The instrument is a scale that teachers/students and parents can complete. The teacher/student and/or parent circle 1 of 3 answers for 40 short questions. The scale measures how a child demonstrates prosocial skills in the last two months.

- A score is added up and analysis by the evaluation team follows.

Comments:

The SSRS is clear and easy to use by teachers and parents. The SSRS is one of the best scales available today for programs such as Head Start, and has been used by many early childhood programs in Canada, including AHSUNC.
Peabody Picture Vocabulary Test (PPVT-IV)

**Author & Year:** Lloyd M. Dunn, Leota M. Dunn & K.T. Williams; Fourth Edition, 2006.

**Publisher:** Pearson Canada Assessment Inc/NCS Pearson, Inc.

**Age:** For people 2.6-90+ years (test has increasing challenge)

**Time needed:** 10-15 minutes

**Training needed:** Conducted by trained personnel in psychological testing.

**Materials:** PPVT-IV, scoring sheet and quiet area

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What the instrument tells us about children?

- The PPVT-IV is a test of receptive vocabulary, which is a general measure of learning and school readiness.

- The test serves as a screening test of verbal ability and can be used as one element of the evaluation of preschool and school age children.

- Gives results in percentiles and age equivalents using norm referenced tables and results, that which is representative of a North American Population and is inclusive of Aboriginal groups and other minorities.

How does the instrument work?

- The test consists of colour drawings. The series of drawings presented to the child in a quiet setting. The examiner says a word and the child points to the right picture. No reading, writing or speaking is needed.

- The test provides an idea of language and learning potential; the evaluation team would administer, score and review the results.
Comments:

The Peabody Picture Vocabulary Test-IV (PPVT-IV) is the standard tool used in many of the evaluation studies of children’s thinking or cognitive abilities. This test has excellent statistical features (reliability and validity). The PPVT-IV limitation is that test examiners need to be qualified in psychological testing and/or social science evaluation methods. The Peabody tool is widely used in early childhood evaluation, including Head Start and Aboriginal Head Start.
Appendix D

Data Collection Measures - Longitudinal Evaluation
Wechsler Individual Achievement Test Second Edition Abbreviated (WIAT-II-A)

Author & Year:  David Wechsler, 2001

Publisher:  Pearson Education Inc.

Age:  6-85 years (with increasing levels of difficulty)

Time needed:  10-20 minutes

Training needed:  Training needed in assessment procedures and how to administer and interpret standardized tests

Materials:  Examiner’s manual, record form, word reading card, spelling card, number card, screen, pencil without eraser, paper and quiet area

What the instrument tells us about children:

- The test identifies skill deficits in attention/spelling, reading and math, with an overall indication of school learning, achievement and readiness.

How does the instrument work?

- The examiner takes the reading, spelling, or number card and covers the card with the screen. The child tells the examiner what is shown on the card or writes their response on paper.

- The WIAT-II-A tests children in the areas of: basic reading, mathematics reasoning, spelling and attention, reading comprehension, numerical operations, listening comprehension, oral expression and written expression.
Comments:

The Wechsler Individual Achievement Test-Second Edition-Abbreviated (WIAT-II-A) is a quick, easy, and reliable test. The test not only tracks academic skills, but also tracks intervention needs in children. The WIAT-II-A is a measure that has been used extensively with Canadian children, Aboriginal children and also with Aboriginal Head Start in the Northwest Territories. Norms are available for the Canadian context with a number of the Wechsler instruments, and in most cases differ only slightly from other North American norms.

Key components for administration are to follow standardized instructions, and to provide an encouraging one-on-one interaction between the evaluator and the student. Group administration is not recommended, due to problems with distractions.
Social Skills Rating Scale (SSRS)

Author & Year: F.M. Gresham and S.N. Elliott, 1990


Age: For children 3-18 yrs, teacher/student & parents complete the scale

Time needed: 10-20 minutes

Training needed: Training of the scale; analysis done by evaluation consultants trained in interpretation of educational and psychological testing

Materials: Scale and quiet area

What the instrument tells us about children:

• The scale emphasizes positive behaviours that are related to academic functioning. Examples of behaviours include: sharing, helping, and relationships.

• Samples children’s skills in three areas of social skill development: social skills, problem behaviours, and academic competence.

• Gives norm referenced tables to compare children to other samples of children; national norms include multiracial, disabled and male/female children.

How does the instrument work?

• The instrument is a scale that teachers/students and parents can complete. The teacher/student and/or parent circle 1 of 3 answers for 40 short questions.

• The scale measures how often a child demonstrates prosocial skills in 2 months.

• The prosocial skills measured are consistent with child development principles.
Comments:

The SSRS is clear and easy to use by teachers and parents with reading levels above Grade 3. It is a multi-rater scale that is several people review the child’s behaviour. The research on the SSRS is very well documented and it has excellent statistical features (reliability and validity). The SSRS is one of the best scales available today for programs such as Head Start, and has been used by many early childhood programs, including Aboriginal Head Start and the United States Head Start programs.
**Peabody Picture Vocabulary Test (PPVT-IV)**

**Author & Year:** Lloyd M. Dunn, Leota M. Dunn & K.T. Williams; 2006

**Publisher:** Pearson Canada Assessment Inc/NCS Pearson, Inc.

**Age:** For people 2.6-90+ years (test has levels of increasing challenge)

**Time needed:** 10-15 minutes

**Training needed:** Conducted by experienced personnel in psychological testing.

**Materials:** PPVT-IV, scoring sheet and quiet area

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**What the instrument tells us about children?**

- The PPVT-IV is a test of receptive vocabulary, which is a general measure of learning and school readiness.

- The test serves as a screening test of verbal ability and can be used as one element of the evaluation of preschool and school age children.

- Gives results in percentiles and age equivalents using norm referenced tables and results, that which is representative of a North American Population and is inclusive of Aboriginal groups and other minorities.

**How does the instrument work?**

- The test consists of colour drawings. The series of drawings presented to the child in a quiet setting. The examiner says a word and the child points to the right picture. No reading, writing or speaking is needed.

- The test provides an idea of language and learning potential; the evaluation team would administer, score and review the results.
The Peabody Picture Vocabulary Test-IV (PPVT-IV) is the standard tool used in many of the evaluation studies of children’s thinking or cognitive abilities. This test has excellent statistical features (reliability and validity). The PPVT-IV limitation is that test examiners need to be qualified in psychological testing and/or social science evaluation methods. The Peabody tool is widely used in early childhood evaluation, including Head Start and Aboriginal Head Start.
Appendix E

Letter to School, Informed Consent and Information Sheet for Parents
November 26, 2007

XCVBN
Principal, School
Box XXX
Town, NT
Ph:

Dear _____:  Re: Aboriginal Head Start Evaluation, January/2008

The _________Aboriginal Head Start program has completed yearly evaluation since 2000, as part of the Western Arctic Aboriginal Head Start Council (WAAHSC) evaluation plan. These initiatives included classroom quality, school readiness and social skills measures to determine whether the program is in fact making a difference. The WAAHSC celebrated its 10th year of operation, this last winter, with the launch: “Ten Years of Aboriginal Head Start in the NWT, 1996 to 2006.”

As well, the Yellowknife/Ndilo AHS program will soon release its own publication of evaluation: “Empowering Our Children’s Futures: The First 10 Years of Aboriginal Head Start in Yellowknife and Ndilo.” This publication will provide the results and findings from the evaluation studies completed to date with AHS children in Yellowknife/Ndilo.

The Aboriginal Head Start Program is forward thinking and wants to continue evaluation activities with AHS graduates and their peers. The WAAHSC has secured funding from the Public Health Agency of Canada to complete the first ever longitudinal study.
The consulting firm of Chalmers and Associates has been working in partnership with the AHS programs across the NWT since 2000, and will be conducting this most exciting next phase of accountability with the AHS program. This firm is committed to providing quality, ethical evaluation activities that are participatory in nature and sensitive to the needs of Aboriginal participants. Our staff members have lived and worked in the NWT as psychologists, educators and research assistants for many years, have applicable training and expertise in the proposed longitudinal evaluation, and belong to several professional organizations. They also have worked with AHS since 1996.

The Public Health Agency of Canada approved the funding for this longitudinal work last week, and we are very rapidly organizing this longitudinal work to take place in all NWT communities with AHS in January of 2008.

We are looking to work with the children from your school as follows:

**NWT School:**
________________________ School

**Classes/Grades:**
Grades 2 to Grades 6

**Dates of AHS Longitudinal Evaluation Project:**
January 14 to January 18, 2008

We would like to work with all children from the classes as above, regardless of whether they attended AHS, for about 15 minutes per child. We will set up three stations of tasks for each child to complete on an individual basis. We estimate that each class of students will take 2-3 hours, where we will be working with each child for 15 minutes, as we have three team members to assist with this work.

Based on our previous experience with this type of work in other NWT schools, we find that individualized completion of each tool is ideal, and gives each child the opportunity to do their best. The results we are seeking are based on the child’s strengths. A pilot test of this evaluation project was completed in the NWT and was well received.

At this time, we are asking for your cooperation and assistance in completing informed consent forms with the groups of children listed in the above grades. The consent form is enclosed with this letter for each parent/family to complete, as well as a summary of the evaluation project.
It is through continually evaluating programs that better programming can be provided to the children of the community, so as to provide them with an excellent “head start” in life. We thank you in advance and look forward to working with the children from __________School. Please feel free to contact us or ____________, Program Manager for the _________Aboriginal Head Start with any questions or concerns.

Sincerely,

Dr. Jennifer H. Chalmers
Principal Investigator & Registered Psychologist (NWT and Alberta)

cc. ______________, ________ Aboriginal Head Start Program
Questions and Answers:

NWT Aboriginal Head Start (NWTAHS)
Longitudinal Evaluation 2008

1. What is Aboriginal Head Start?

Aboriginal Head Start is a federally funded early childhood intervention program for young Aboriginal children and their families by the Public Health Agency of Canada. Program components of Aboriginal Head Start include culture and language, education, health promotion, nutrition and social support. There are 8 Aboriginal Head Start sites across the Northwest Territories (NWT).

2. What is a Longitudinal Evaluation?

A longitudinal evaluation is a type of evaluation that looks at the impact of an intervention such as Aboriginal Head Start many years later. There has been good evidence to show that early childhood programs help children succeed in school. There are few evaluation projects such as this one being done in Canada, and results will help to understand the impact of the Aboriginal Head Start program in the NWT.

3. Who are the Evaluation Team Members and what is their role?

The evaluation team members consist of educators, psychologists, evaluation fieldworkers and staff from the local Aboriginal Head Start Program. The team has been working with Aboriginal Head Start since 1996. The evaluation team’s role is to implement the pilot as funded and overseen by the Western Arctic Aboriginal Head Start Council. The proposed evaluation is in keeping with culture based evaluation practices.

4. What is the potential impact for children who participate in this study?

There are no expected impacts for the children participating in this evaluation, as the skills being reviewed are within daily education and school-related activities. As well, group analysis is the final goal by class, so no individual child’s results will be identified. Furthermore, the approach taken is based on identifying strengths of the class of children.

5. Where can I get more information about this evaluation pilot?

Please contact your local Aboriginal Head Start Program in your community or school for further information. Thank You.
Dear Parent/Guardian,

The purpose of the Aboriginal Head Start in Urban and Northern Communities Longitudinal Study is to determine the effectiveness of this early intervention program with Aboriginal children in the Northwest Territories. Aboriginal Head Start programs support the spiritual, emotional, physical and intellectual growth of over 4000 children across Canada, and has been in operation since 1996.

This longitudinal evaluation study is part of the evaluation of the Aboriginal Head Start program. Communities across the NWT are being asked to participate in this evaluation of school age children. At the end of the study, it is anticipated that findings will provide guidance for program development, increased funding for preschool programs like Head Start, and information of the program’s effectiveness to benefit NWT communities.

I understand the following:

1) All results will be kept confidential, and individual children’s names will not be used in the reports or publications from this work across the NWT. The information collected will only be used for the Aboriginal Head Start in Urban and Northern Communities Longitudinal Study.

2) This evaluation project involves the participation of my child/children for about 15 minutes in January-February/2008, and will use standardized measures of social skills and school readiness (reading, basic math and vocabulary). There are few if any risks in participating, as the children will be doing examples of work that are commonly found in the school curriculum.

The participation in this study is voluntary, and I reserve the right to withdraw this consent at any time.

If you have any questions please feel free to contact your school principal or the evaluation team of Chalmers and Associates, toll free at 1-877-884-8889.
I agree to have my child participate in the evaluation activities of the Aboriginal Head Start Longitudinal Evaluation Study in NWT communities 2007-2008.

________________________________ ______________________
Signature of Parent/Guardian   Date

_________________________________ _______________________
Name of Child/Children   Name of NWT School
Appendix F

Background Information of Evaluation Team
**Background Information of Evaluation Team**

The evaluation team for this project was Chalmers & Associates Consulting Ltd. Collectively the evaluation team has conducted over 50 program evaluation studies, 25 research studies and over 100 program development projects in the last 20 years with client groups across Canada.

**Principal Investigator - Dr. Jennifer H. Chalmers**

Dr. Jennifer Chalmers is an evaluation consultant and clinical psychologist, whose practice focuses on the psychosocial needs of Aboriginal people and families living in community settings. Jennifer has lived in various large and small communities across Canada, and has spent several years in an isolated community in the NWT. Her qualifications include two Bachelor’s Degrees in Psychology and Physiology, a Master’s Degree in Counselling Psychology (1997), and a Doctor of Psychology, in Clinical Psychology. Dr. Jennifer Chalmers is a registered psychologist in the provinces of Alberta, Saskatchewan and in the Northwest Territories.

**Research Associates - Dr. Marjan Saghatoleslami & Liz Cayen**

Dr. Marjan Saghatoleslami provided data collection, analysis and report writing with the Longitudinal Pilot Study. Her qualifications include a Bachelor’s Degree in Psychology from York University, a Master’s Degree in Counselling Psychology and a Doctor of Psychology, in Clinical Psychology. Marjan specializes in learning disabilities and cross-cultural counseling.

Liz Cayen is an evaluation consultant based in Inuvik, NWT. Liz has been an evaluation associate in over forty (40) evaluation and program development that have emphasized Aboriginal priorities, early childhood, education and training, and social programs. Her work includes planning and implementation of evaluation projects, analysis and writing, and project costing. Liz holds a Bachelor Degree in Psychology, a Master’s degree in Education from Athabasca University and a Master’s Degree in Social Science from Leicester University.
Other Resource Persons - Sharon Snowshoe, Eileen Koe & Dr. Cheryl Bradbury

Chalmers & Associates relies on a multidisciplinary team that is inclusive of resource persons from community-based agencies, elders, education and clinical personnel, as well as evaluation experts to provide input and consultation. The following resource persons were consulted during this project:

Sharon was born and raised in an isolated NWT community, and considers herself a “community person.” Sharon has worked as the Band Manager, Land Claim Enrollment Coordinator, Education and Training Coordinator and currently is the Executive Director of the Gwich’in and Social Cultural Institute. Sharon has been involved with many of the firm’s projects, including the NWT’s Aboriginal Head Start Outcome Evaluation in 2001, and recent follow-up studies. She has a keen eye for analysis and provides cultural/ethical support to the firm’s projects.

Eileen Koe is a respected elder and community member from Fort McPherson, NWT. She has been a social worker in years past, sub-chief of the Tetlit Gwich’in Council, former Chair of the Tl’oondih Healing Society, and all round support for community-based projects. Eileen was chair of the Tl’oondih Healing Society during the timeline of this longitudinal work, and was a keen support in providing assistance with the project.

Dr. Cheryl Bradbury has experience with Chalmers & Associates’ projects in the form of data analysis with SPSS software and back-up support for project activities. Her qualifications include a Bachelor’s Degree in Psychology from York University, a Master’s Degree in Counselling Psychology and a Doctor of Psychology, in Clinical Psychology.
Appendix G

References
References


Schmitz, C.C. & Parsons, B.A. (1999). *Everything you wanted to know about logic models but were afraid to ask.* Battle Creek, MI: W.K. Kellogg Foundation.


Hope for the Future

“The destiny of a people is intricately bound to the way its children are educated. Education not only bears on the economic well-being of a people and a nation, but provides resources for attacking poverty, social exclusion and poor health, while also expanding the range of human choice.

While the seeds planted today will not bear fruit immediately, they should bloom in succeeding years to provide greater opportunities and more potential for fulfillment of hopes and aspirations of future indigenous generations.”

(From Dances with Dependency: Indigenous Success through Self-Reliance by C. Helin, 2006)