

## **Critical Review: Closing the Language and Literacy Gap with a Culturally Appropriate Approach to Language Assessment and Intervention for Aboriginal Children**

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This critical review investigated the effect of an approach to assessment and intervention in speech-language pathology that is culturally appropriate for Aboriginal children. Many Aboriginal children in Canada are immersed in a culture and speak a First Nations English Dialect (FNED) that is different from the rest of the nation and therefore, have different needs when it comes to language assessment and intervention. The reviewed studies consisted of single group studies without a control, nonexperimental case studies and surveys, and an expert opinion. These studies provided suggestive evidence that making such cultural considerations for Aboriginal children could have a considerable impact on their language and learning outcomes. Although the current available research is limited and possesses lower levels of evidence, inherent of their study designs, their objectives are imperative to the future possibilities of closing the gap between Aboriginal children and their Western counterparts.

### ***Introduction***

Canada is a diverse nation, comprised of individuals from a wide variety of cultural and linguistic backgrounds. With these unique backgrounds come diverse ways of developing, understanding, and using language. Speech-Language Pathologists (SLPs) work with the entire spectrum of individuals in Canada, and this includes children from different cultures, including Aboriginal children raised in households where the language practices may differ from the general population that SLPs are most familiar with assessing and treating in their practice, i.e instead of using spatial relationship prepositions they would instead say 'over there' with a gesture (Ball, 2011). However, SLPs are required by the College of Audiologists and Speech-Language Pathologists of Ontario (CASLPO) to provide services that are responsive to the cultural and linguistic differences of the population that they serve. CASLPO identified that SLPs must be aware of cultural and linguistic factors when conducting an assessment as a practice standard (CASLPO, 2019). Additionally, CASLPO provides documentation that stresses the profound effect different cultures can have on assessment and treatment. CASLPO then suggests the use of non-standardized procedures and materials that reflect the cultural norms of their client (CASLPO, 2014). However, Aboriginal children are not often assessed or provided with intervention practices that are responsive to their unique culture (Kramer et al., 2009).

Aboriginal children in Canada lag behind their peers in the area of language development and learning at school (Eriks-Brophy et al., 2008). Before children even enter school, inadequate language skills have been shown to be associated with behaviour and attention problems,

and poorer literacy skills, educational achievement, and cognitive performance (Findlay and Kohen, 2013). It has been reported that between 40-50% of Aboriginal children in Canada do not meet standardized testing requirements in grades 4, 7, and 10, and 75% fail to graduate from high school (Eriks-Brophy et al., 2008). It has also been estimated that one-half of all new jobs in Canada will require a secondary school diploma, therefore rendering the need to close the language and learning gap between Aboriginal children and their peers an urgent matter (Erika-Brophy et al., 2008).

The assessment and intervention procedures of Aboriginal children's language abilities require immediate attention. Children in this population are both under and over identified with developmental challenges, which demonstrates the inadequacy of the current protocol, i.e their skills are underestimated through inappropriate testing procedures, and they are often disproportionately referred for screening, assessment, and intervention (Findlay and Kohen, 2013; Ball and Lewis, 2011). Most diagnostic tools and intervention protocols have been developed and standardized on children who were raised in Western culture (Ball and Lewis, 2011). These procedures therefore do no account for cultural differences in language that exist.

As this population continues to grow (Ball and Lewis, 2011), the need to provide responsive services increases and the language and literacy gap widens. Therefore, this critical review will aim to answer what a culturally appropriate approach to language assessment and intervention looks like and whether it could be suitable to help close the language and literacy gap.

## ***Objectives***

The primary objective of this paper is to review and critically analyze the current research available on language assessment and intervention for Canadian Aboriginal children and determine what a culturally appropriate approach entails.

## ***Methods***

### Search Strategy

Articles related to the topic of interest were found through the following online databases: PubMed, Google Scholar, and the Canadian Journal of Speech-Language Pathology and Audiology (CJSLPA). The following keywords were used to search the databases: [speech and language] (for PubMed and Google Scholar) AND [assessment] OR [intervention] AND [First Nations] OR [Aboriginal] AND [Canada] AND [child\*].

### Selection Criteria

Papers were selected when they met the following criteria:

- 1) studies on language intervention or assessment approaches for First Nations or Aboriginal children in Canada,
- 2) studies suggesting a culturally competent approach,
- 3) studies that came from a speech-language pathology approach.

Studies were excluded when they focused on non-Canadian Aboriginals, i.e. Australian, did not specifically focus on assessment or intervention approaches, and did not have a focus on the field of speech-language pathology, i.e. education fields.

### Data Collection

Results of the search criteria above generated six articles, including two single group studies without a control and only one variable (level 3 evidence), one case study (level 4 evidence), two nonexperimental surveys (level 4 evidence), and one expert opinion (level 5 evidence).

## ***Results***

### Single Group Study without Control

Although these studies lack a control group, they are able to provide a higher level of evidence than other studies that do not have an experimental design. These studies perform pre-tests and post-tests; however, they are unable to make the claim that the outcome is a result of the treatment, rather than other confounding factors. Nevertheless, single group studies without control

groups add a lot of value to the research field, especially when it would otherwise not have been possible to do.

**Khan and Paddick (2014)** conducted a single group study without a control group that was a pilot intervention program designed to address the perceived weakness of First Nations, Metis, and Inuit (FNMI) children's skills in early literacy abilities. The First Nations, Metis, and Inuit Early Literacy and Language Enrichment Project (FNMI-ELLEP) was designed by a Speech-Language Pathologist from Khan Communication Services Inc. and was implemented in partnership with kindergarten and grade one teachers across two schools in northern Alberta.

11 FNMI students participated in the aspects of pre- and post-testing of the program. The testing consisted of two target areas: storytelling, specifically story grammar, and phonological awareness, specifically rhyming. Standardized tests were implemented by the SLP (two subtests of the Phonological Assessment Test (PAT) and the Edmonton Narrative Norms Instrument (ENNI)), and criterion referenced scoring was implemented by the teachers after training was provided. The program consisted of three in-services for teachers, three classroom demonstrations, and two parent workshops.

The results of the study showed that all eight of the children who participated in pre- and post-testing of storytelling abilities had a substantial increase. It was also found that six of the eight children who participated in pre- and post-testing for phonological awareness improved in their ability to identify and produce rhymes.

Studies without control groups are unable to determine whether results are truly a result of the treatment applied and not due to maturation or other learning happening inside or outside of the classroom. Additionally, as statistical measures were not provided, the validity of the results is only suggestive. However, the clinical importance of a program designed to target enrichment of FNMI children's language and literacy could have high clinical utility for the population, and therefore renders this study as suggestive.

**Kramer et al. (2009)** conducted a single group study without controls and only one variable that intended to investigate the capability of dynamic assessment in differentiating between normal language learners (NLL) and children with possible language learning difficulties (PLLD). Dynamic assessments (which draw on Vygotsky's zone of proximal development and therefore use an interactive approach to identify what the child knows and their learning potential) are said to be a more

accurate and culturally-appropriate approach to language assessment in First Nations children and other cultures different than Westernized cultures in Canada, as they focus not on what the child currently knows, but what the child is capable of learning with brief explicit instruction. The Dynamic Assessment and Intervention (DIA) tool was used and employed a test-teach-retest method for the assessment of narratives in 17 grade 3 First Nations children in Alberta. Five of the children were identified by school personnel as having PLLD, and the other 12 were assumed to be NLL. These factors add bias to the study. However, administrators of the assessment were blind to their language categorization.

Two assessment administrators gave each child one wordless book (*Two Friends*) and asked the child to narrate the story, after providing time to peruse the pages. The children were assessed using the DIA scoring criteria (i.e. number and quality of story components, language complexity, episode elements and structure, etc.). Tests were scored by one of two administrators, however the administrators met to come to a consensus on the scoring of each transcript, however, the details of this were not discussed. Elements were scored on a scale from 1-5. In the teach phase, each child received two intervention sessions where one session focused on teaching one component that was assigned a score of 1 or 2 (indicates little knowledge), and the other session on a component that was scored a 3 or 4 (indicates some knowledge). Finally, the child was retested using a different wordless book (*The Bird and His Ring*).

The results of the study were made by many statistical analyses and found that the school personnel had 91.7% specificity in correctly identifying children who had NLL and an overall agreement of 94.1%. The study also found that the children who were NLL were able to make greater gains from pre-test to post-test in both targeted areas and untargeted areas. However, children who were discovered to have PLLD made statistically lower gains and were unable to make these generalizations. Inter-rater reliability was discussed in the study, however, as each audio file was transcribed and scored by only one administrator with the final consensus on scoring being made by the two administrators together, inter-rater reliability could not be examined, and no statistical analysis could be made.

It was also noted that all of the children had similar initial test scores, therefore, without the teach and re-test aspects of the assessment, no differences would be found in the language profiles of the children. Therefore, this study has high applicability for the First Nations population as a traditional static assessment would not have made these findings. However, this

study has a small sample size and was unable to incorporate a control group or test for reliability, and therefore has only a suggestive level of evidence.

### Case Studies

Case studies can be useful sources of research. They can assist with generating new ideas in the field of study and serve as an exploration of a topic that may otherwise be difficult or impossible to study. However, the results of case studies can have limited generalization, and as there is no experimental design, the results of the study need to be carefully considered.

**Peltier (2014)** conducted a case study comprised of Anishinaabe children's narratives that were analyzed using two coding systems. The two coding systems were: the Narrative Scoring Scheme (NSS) from the Systematic Analysis of Language Transcripts (SALT) software to represent the Western based perspective of the quality of a narrative, and a coding system that was derived based on four Elders perspective of the quality a narrative. The four Elders were chosen based on the criteria that their first language was Anishinaabemowin and they had not attended formal schooling beyond high school, so to ensure that their Aboriginal background frames their perceptions of the world and oral narratives. The participants of the study consisted of eight Anishinaabe children, 8 to 10 years of age, that were selected from convenience sampling.

The children told their narratives in a storytelling circle in a group setting in the community. The children told a total of 36 narratives and the stories were analyzed by the researcher using the NSS criteria and the Elders coding system. The results yielded both agreement and disagreement between the two scoring systems. A number of features of the Anishinaabe story structure and content was similar to that of the Western-perspective narrative analysis. However, there also existed some incongruence of the consensus of the narrative qualities. These findings suggest that the Western and Anishinaabe perspectives do not always align on their views of the components of a good narrative.

Although the results of this case study should be taken with caution as there were small sample sizes with no controls and the ratings were completed by only the researchers herself, the information gleaned from this study are still suggestive in nature. The implications of these findings have high clinical importance as children of Aboriginal descent are likely assessed through a Western lens in the education system, which may impact overdiagnosis of literacy and language impairments.

### Survey Research

These studies collect qualitative information, often from the public or experts in the field, regarding people's knowledge, opinions, experiences, and observations. They can provide valuable information, especially when the availability of research is limited. However, they can be limited by the questions being asked and biased from the views of the researcher and the individuals being surveyed.

**Ball and Lewis (2011)** conducted a survey to investigate the knowledge, skills, and current practices used by and needs of SLPs working with Canadian Aboriginal children with language needs. SLPs were recruited through notices circulated by agencies that deliver programs for Aboriginal children, i.e. Aboriginal Head Start, Friendship Centres, etc. Seventy members of the Canadian Association of Speech-Language Pathologists and Audiologists (now SAC) responded to the request and completed the survey either online or by mail. The seventy members reported to have at least two years of practical experience working with young Aboriginal children.

The survey consisted of 59 main topic items, developed by the co-authors and revised by 6 SLPs who work extensively with Aboriginal children. The question formats included: 4 closed questions regarding work history, 19 yes/no response questions, 19 items asking for ratings on a five-point scale, and 17 open-ended questions. Non-parametric statistical analyses were applied on the ratings, which found that very little variability existed between the responses, however exact measures were not provided. A coding system used for open-ended questions, which was described in sufficient detail and yielded an inter-coder reliability using Cronbach's alpha which ranged from 0.78 to 0.97.

The results of the survey were summarized and provided specific recommendations for SLPs working in speech and language with Aboriginal children. The authors noted that SLPs should understand the cultural effect on communication and learn culturally appropriate facilitation methods and the differences of the child's dialect from English. SLPs should also work collaboratively with members in the community in a way that allows family members to trust clinicians and feel they are a valued collaborative partner. Additionally, the results of survey recommended a population-based approach, where the needs of the population are addressed rather than individual needs. They also emphasized the need for less formal and standardized assessment approaches, and endorsed greater use of observation, criterion-referenced, and dynamic assessments such as test-teach-test methods.

The information collected by the authors is persuasive, however, due to the nature of the level of evidence obtained in nonexperimental surveys, the paper provides suggestive evidence of the provided views on a differentiated approach to language assessment and intervention of Aboriginal children.

**Findlay and Kohen (2013)** conducted a survey to be able to describe how items collected from parents and guardians of Aboriginal children in Canada could be used as language indicators when the current validity of language assessment measures is low. Data was collected from the Aboriginal Children's Survey (ACS), a 2006 survey that was developed by Statistics Canada and Aboriginal advisors. The ACS surveyed 12,845 parents/guardians of off-reserve First Nations children, Metis children, and Inuit children, 2 to 5 years of age. The questions were broken down into 7 questions that required a response based on a five-point Likert scale, and four yes/no questions, in addition to questions regarding the child and child's family's socio-demographic characteristics.

The data collected was analyzed in great detail with a variety of statistical measures. The results of the survey produced four language outcomes: expressive language, mutual understanding, storytelling, and speech and language difficulties. The data was additionally analyzed across Aboriginal identity groups and socio-demographic characteristics. Some ceiling effects were found across the indicators for expressive language, mutual understanding, and storytelling. The results did not indicate whether there were significant differences found between the Aboriginal identity groups. The results did however confirm many expected trends across the socio-demographic characteristics, i.e. boys had lower scores than girls, children living in higher-income households were less likely to have speech and language difficulties, etc.

There were many limitations of this study. For example, many ceiling effects were noted as sometimes the majority of respondents selected the highest-level response, suggesting that the questions required a wider range of choices. Additionally, having multiple raters, i.e. observers, additional caregivers, teachers or other educators of the child, may have increased the validity of the responses. Therefore, the overall validity of this study is suggestive in its current form. As the study did not verify that the parent/guardian responses were accurate, it is difficult to assess whether the study was able to show that having parents and guardians surveyed produces notable language indicators, which was the purpose of the study. Therefore, the clinical

implications of this study are equivocal, and the clinical bottom line of this paper was rendered suggestive.

### Expert Opinion

These studies can provide valuable information as the knowledge comes from individuals with many years of practice and real-life experience with the population. These individuals often have great insight into the direction of change and growth in their specific field of study. Expert opinions are especially important when there is limited research being conducted in such a field. However, individuals need to be cautioned when accepting the information as it can be subjective and bias as it lacks sufficient research protocols to back up the evidence. This is particularly true in the very diverse Aboriginal population.

**Eriks-Brophy (2014)** provided an in-depth critical evaluation of the strengths and limitations of the various forms of language assessment of Canadian Aboriginal children. The information expressed in this expert opinion paper was collected and gathered from extrapolations from the literatures, interactions with experienced clinicians in this population, and the author's own personal experiences. The author outlines the Aboriginal context and the need for clinicians to consider the child's cultural background when conducting a language assessment. The paper then goes on to make a specific evaluation of each form of language assessment for the population of interest and subsequently, recommendations for its use.

The paper asserts that standardized assessment measures, such as standardized tests and published questionnaires and rating scales, possess great limitations when used with Aboriginal children as this population has either not been represented or has been minimally represented in the normative sample and often there exist cultural and dialectal differences that render the test, questionnaire, or rating scale a poor measurement for identifying a language impairment, and rather, differences represent a language difference. One of the suggestions of the author is to administer a selection of subtests that appear to better represent the child's language abilities and forgo the use of subtests that appear invalid to cultural and dialectal differences.

The evaluation of child-centered assessment approaches, such as criterion reference assessments, language sampling, and dynamic assessment, provided that a more accurate understanding of the child's language abilities could be realized if appropriate measures are taken to understand the communicative norms and values of the cultural community of which the child lives. A more holistic approach to assessment is also a recommended approach, including curriculum-,

portfolio-, and routines-based assessments. The author cautions that these approaches are relatively new to the field, however, they can be an effective alternative in assessing children with diverse cultures and dialects.

The author is an expert in the field of Canadian Aboriginal child speech and language, with many relevant publications. She also used many references to back up opinions in the paper. The author also makes a persuasive argument. Therefore, considering both the validity of the expert opinion and the clinical importance of the subject matter, a suggestive evidence evaluation of the paper is applied to this body of research.

### *Discussion*

Overall, the evidence on the best practice of language assessment and intervention for Aboriginal children is limited. Additionally, the minimal research that exists predominantly consists of lower levels of evidence, rendering it only suggestive. However, the field of speech-language pathology is nevertheless fortunate that individuals working with this population have collected, documented, and published information on the subject matter in a way that can benefit those in need of it for their practice.

The six reviewed pieces of literature presented a great deal of suggestions for the best practice of assessment and intervention in this population, and although the population is diverse in terms of traditions, communities, values, etc., many of them had overlapping themes. One of the first recurring themes was the use of narrative structures/storytelling. Storytelling has been a large part of tradition for Aboriginal people for centuries and it was therefore spoken about in multiple papers in this critical review. Therefore, working on narrative structures may be a good possible avenue to approach intervention for Aboriginal children with language disorders. However, it was also suggested that clinicians be cautious of results or the interpretation of narratives during assessment as it may suggest a language difference rather than a language disorder.

Another broad theme across the reviewed literature was the use of formal assessments. Formal assessments generally focus on a Western perspective and are usually standardized on populations that do not include or minimally include Aboriginal children. Aboriginal children should not be compared against norms where they were not represented. The Western perspective of formal assessments would also likely render them inappropriate for Aboriginal children, therefore, it is suggested across multiple papers in this review that

dynamic assessments are more appropriate with the most widely suggested one being a test-teach-retest method. This method is also ideal for teasing apart a language difference from a language disorder.

The third main suggestion for practice is working collaboratively with and gaining the perspective of elders and other community members. Aboriginal people can have a distrust of healthcare workers and other individuals with authority of non-Aboriginal descent due to the turbulent history Aboriginal people have faced from colonialism and more recent times, such as the residential school system and the sixties scoop. Therefore, clinicians should aim to develop a trusting relationship with community members, let them know that their opinions are valued, and learn what it is that makes their culture and use of language unique.

The final overarching suggestion for language intervention with Aboriginal children is to work at the population level rather than the individual level. This approach suggests that clinicians focus their efforts on the needs of the population with a preventative approach. Clinicians should therefore work with children in group settings rather than work on the needs of one individual. This will also allow clinicians to increase their reach.

### ***Clinical Implications***

This critical review examined the most relevant articles in the literature in order to determine what a culturally appropriate approach to language assessment and intervention for Aboriginal children looks like. The reviewed literature provided many suggestions, which have been summarized into the following four broad recommendations: work on narrative structures and storytelling, consider forgoing formal assessment for dynamic assessment approaches, collaborate with members of the community, and work at the population level rather than the individual level.

These four suggestions will hopefully provide a helpful starting place for clinicians working with most Aboriginal populations; however, it is important to keep in mind that every community is diverse. Therefore, more tailored practice changes may need to be implemented. SLPs could accomplish this by conducting their own community-based exploration or by using a reason-based approach when deciding what makes most sense for their practice. This critical review also highlights the need for specific tools to be created to assist SLPs in the assessment and intervention of Aboriginal children, and the demand for more research.

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