Dynamic Assessment and Small-Group Play-Based Context Supporting First Nation Children's Standard English Language Development

Évaluation dynamique et jeux en petits groupes comme contextes pour soutenir le développement du langage en anglais standard d'enfants d'une Première Nation

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Abstract

A speech-language pathologist collaborated with a literacy researcher and Indigenous educator in a northern Ontario Indigenous community to develop a clinical approach supporting young children's Standard English language development. The initiative began with the development of a dynamic assessment tool through modifying an existing tool based on input from local Indigenous educators to include more culturally appropriate items. The modified dynamic assessment was administered by the speech-language pathologist using a test-teach-retest process. Children who completed the assessment tasks with support, showing that they required assistance beyond regular classroom activities but not full services, met weekly with the Indigenous educator from their community. During these half-hour sessions, the educator modeled Standard English and engaged children in conversation while children played with toys. This paper reports on analysis of three video-recorded sessions of the play-based sessions. Videos were analyzed in terms of the kinds of educator input that elicited children's multiple-word responses, their use of conventional sentence structures, and use of target grammatical markers (use of plural nouns with s, gender pronouns, and wh-questions), identified through a conversational assessment with the clinician. Results of analysis showed that the three children were more likely to provide multiple-word responses with subjects and predicates when the educator affirmed what they did or said, provided information, and directed their behaviour. A strength of the clinical approach is involving a local Indigenous educator who was familiar with the children's use of their community's First Nations English Dialect, recognizing and recasting children's use of non-standard grammatical patterns.

Abrégé

Une orthophoniste a collaboré avec une chercheuse dont l'expertise est la littératie et une éducatrice autochtone afin de développer une approche clinique soutenant le développement du langage en anglais standard de jeunes enfants vivant dans une communauté autochtone du nord de l'Ontario. Un outil d'évaluation dynamique a d'abord été élaboré, et ce, en intégrant les commentaires d'éducateurs autochtones provenant de la communauté à un outil existant pour y inclure des éléments plus appropriés au plan culturel. La version modifiée de l'outil d'évaluation dynamique a par la suite été administrée à des enfants par l'orthophoniste à l'aide d'un processus test-enseignement-retest. Les enfants qui ont nécessité un soutien pour effectuer les tâches d'évaluation (ce qui était considéré comme une indication que ceux-ci avaient besoin d'assistance qui allait au-delà des activités normalement effectuées en classe, mais qu'ils n'avaient pas besoin d'une prise en charge complète en orthophonie) ont rencontré l'éducatrice autochtone de leur communauté de façon hebdomadaire. Au cours de ces séances d'une demi-heure, l'éducatrice fournissait des modèles verbaux en anglais standard et engageait la conversation avec les enfants pendant que ceux-ci jouaient avec des jouets. Cet article rapporte les analyses ayant été réalisées sur les énoncés effectués lors de trois rencontres de jeu enregistrées. Les types d'énoncés effectués par l'éducatrice qui ont suscité, chez les enfants, des réponses comprenant plusieurs mots, l'utilisation de structures de phrases conventionnelles et l'utilisation de marqueurs grammaticaux spécifiques (c.-à-d. des noms qui prennent un « s » au pluriel, des pronoms ayant une forme marquée en genre et des mots interrogatifs anglais commençant par « wh- ») ont été analysés. Les marqueurs grammaticaux spécifiques sur lesquels l'éducatrice devait intervenir avaient été préalablement identifiés grâce à une évaluation conversationnelle réalisée par l'orthophoniste. Les résultats ont montré que les trois enfants étaient plus susceptibles de fournir des réponses comprenant plusieurs mots, dont un groupe sujet et un groupe prédicat, lorsque l'éducatrice fournissait des informations additionnelles qui permettaient de définir un concept, gérait le comportement d'un enfant, ou encore, effectuait un commentaire sur ce que faisait ou disait un enfant. Un point fort de l'approche clinique présentée consiste en l'implication d'une éducatrice autochtone qui vivait dans la communauté et qui connaissait bien la façon dont les enfants de la communauté utilisaient l'anglais standard. Cela lui permettait de reconnaître les moments où les enfants des Premières Nations n'utilisaient pas un anglais standard et de reformuler leurs propos.

In this paper, we describe a clinical approach using dynamic assessment to identify First Nation (FN) children who would likely benefit from additional supports for Standard English, followed by a play-based intervention led by an early childhood educator from the FN community. Our approach was designed to address challenges that speech-language pathologists (S-LPs) face in accurately identifying children in FN communities with language difficulties and in providing these children with culturally and linguistically appropriate supports. These challenges arise because of a lack of appropriate tools, limited knowledge about the languages and First Nations English Dialects (FNEDs) used in each community, and the use of ineffective approaches.

Assessment Challenges

The content of the items in assessment tools that have been developed and normed predominantly on children of European-heritage in urban settings may reflect concepts, perspectives, and values that are unfamiliar to northern Indigenous children (Dench, Cleave, Tagak, & Beddard, 2011; Eriks-Brophy, 2014; Peltier, 2011). The assessment approaches may put the children in uncomfortable or upsetting positions (e.g., being expected to provide immediate responses to questions, rather than being allowed the time to respond that is considered appropriate within the children's culture).

Additionally, the language used or expected in the assessments may not reflect the phonological, morphological, and syntactical patterns of the FNED spoken in the children's communities (Ball & Bernhardt, 2008; Bovaird Wawrykow, 2011). Children who are competent language users may provide responses that do not use the expected syntax, speech, or morphological patterns. The FNED in an FN community, situated within sociointeractive patterns of their community and within wider Canadian society, is based on community members' ancestral language and Standard English (Ball, 2007; Bovaird Wawrykow, 2011; Peltier, 2011). Each FNED has variations specific to the language users of the community (e.g., using determiners preceding proper nouns; Flanigan, 1987; Siegel, 2010) and also some similarities to the dialects of other FN communities, such as deletion of auxiliary verbs, pronoun substitution, and forming of wh-questions without the subject-auxilliary/modal inversion (Bovaird Wawrykow, 2011).

There may also be a lack of knowledge of the geographic, linguistic, and cultural diversity of FN communities in Canada (Eriks-Brophy, 2014). More than 50 Indigenous languages are spoken in Canada (Cook & Flynn, 2008). Cultural practices, including ways of socializing young children and learning styles, vary across communities (Eriks-Brophy, 2014). Communication between children and adults is influenced by factors such as "the organization of turn-taking, the role of silence, and the maintenance of appropriate interactional hierarchies" (Eriks-Brophy, 2014, p. 155). Mismatches related to professional attitudes and lack of recognition of the diversity of FN communities lead to inaccurate identification of children's language, challenges in communication between children's parents/caregivers and service providers, and less effective provision of services (Ball, 2007; Peltier, 2011; Zeidler, 2011).

Researchers have found that it is important to get information from local sources when designing assessment instruments (Ball, 2007; Dench et al., 2011; Eriks-Brophy, 2014). Such consultation increases the relevance to children's lives of both the content of items (e.g., themes, objects, and pictures used in the assessment) and the assessment practices that are carried out (Jones & Campbell Nangari, 2008). The development of an Inuktitut and English language screening tool in Nunavut, for example, involved community members from the beginning of the assessment design process to ensure cultural appropriateness in terms of how the assessment approaches were compatible with the community's language socialization practices (Pesco & Crago, 2010). Community members also monitored the accuracy of the use of the Inuktitut language.

Yet, because of time constraints (e.g., communities' budgetary constraints do not allow for the time needed to develop additional/modified assessments), and the small sample sizes, it is not possible for S-LPs to create new assessments for each FN community with which they work. Indeed, strategies used to attempt to reduce the influence of cultural and linguistic biases of standardized assessments on identification of children's speech and language needs include changing item scoring based on knowledge of the children and their community's cultural and linguistic practices or administering only the subtests that are deemed more culturally appropriate. The reliability and validity of results obtained using these practices is also questionable because of the lack of fidelity to the standardized procedures (Eriks-Brophy, 2014). In the following section, we describe studies that have attempted to address issues of designing culturally appropriate assessments.

Dynamic Assessment Approach: Literature Review and Theoretical Approach

Dynamic assessment involves testing to gather information about a child's language or speech, followed by teaching (e.g., providing prompts or models) if the child

is unable to carry out the task, and then retesting within a short period using the same measures to determine if the task is an emerging skill (Fuchs, Compton, Fuchs, Bouton, & Caffrey, 2011; Hasson, Camilleri, Jones, Smith, & Dodd, 2012; Peña, Gillam, & Bedore, 2014). Through these three phases, dynamic assessment allows S-LPs to "differentiate between children who have not yet learned something (e.g., due to limited exposure) from those who, presenting with the same language level, show real difficulty in learning" (Asad, Hand, Fairgray, & Purdy, 2013, p. 322).

Studies examining assessment of Indigenous children's language conducted in the United States (kindergarten: Ukrainetz, Harpell, Walsh, & Coyle, 2000) and in Canada (Grade 3: Kramer, Mallett, Schneider, & Hayward, 2009) show the value of dynamic assessment. In these studies, children who were classified as "normal language learners" or "stronger language learners" benefited to a greater degree from the teaching prompts of the dynamic assessment (principles of categorization and examples) than did those who were deemed to have possible language learning difficulties or were "weaker language learners." Dynamic assessment is, thus, considered "a promising approach to conducting culturally valid and less biased assessments of Aboriginal children and for reliably identifying children with potential language disorders" (Eriks-Brophy, 2014, p. 163).

Dynamic assessment is underpinned by sociocultural theory (Vygotsky, 1978). Interacting with someone who is more experienced and competent supports children's learning. The Zone of Proximal Development is the "distance between the child's actual developmental level as determined by independent problem solving and the level of potential development" (Vygotsky, 1978, p. 86). In dynamic assessment, if the S-LP's prompts, questioning, or modelling leads to the child's successful completion of the task, the language skill or understanding is within the child's Zone of Proximal Development (Peña, Iglesias, & Lidz, 2001). The amount of assistance that a child needs in the Zone of Proximal Development is an indicator of how close the child is to mastering skills at an independent level (Kramer et al., 2009). When using a dynamic assessment approach, children's learning strategies and responsiveness to adult support

> can provide information about how the child learns, as well as the learning process that may need to be targeted in intervention. Thus, it is necessary to determine both the zones of actual and proximal development in order to more fully understand the level of functioning of the child (Peña et al., 2001, p. 151).

Play as a Culturally Relevant Language Intervention

Play provides a forum for exploring and learning language (Eisazadeh, Rajendram, Portier, & Peterson, 2017; Peterson, Eisazadeh, Rajendram, & Portier, 2018). Through interacting with others using language in play contexts, young children make sense of the objects, actions, situations, and relationships in their world (Bodrova & Leong, 2007; Vygotsky, 1978). In the process, they adopt the social purposes and ways of interacting of their social environment (Barnes, 2008; Boyd & Galda, 2011; Halliday, 1978). Play is culturally relevant because it allows FN children to take up roles that they see in their homes and in their community and provides opportunities for their use of words and expressions that are meaningful within their community (Jacob, Charron, & da Silveira, 2015; Niles, Byers, & Krueger, 2007).

The Zone of Proximal Development is also important when considering the learning potential of play as children can try out and get immediate feedback on emerging understandings about language and language use in a range of social settings (Weitzman & Greenberg, 2002). The social, cognitive, linguistic, emotional, and physical demands of play create motivational and safe supports for children's emerging language skills and understandings (Bodrova & Leong, 2007). Vocabulary development, which is facilitated through repeated exposure and opportunities to use words in meaningful contexts (Biemiller & Boote, 2006; Neuman, 2011), together with social understandings about language use (Myhill, Jones, & Hopper, 2006), are supported in play contexts because children use language while interacting with others in contexts that draw on their funds of knowledge (Hedges, Cullen, & Jordan, 2011).

Method

The clinical approach presented in this paper stems from a collaboration between an S-LP (clinical), an FN early childhood educator, and a university professor in literacy education. Our research was approved by the Human Protocol committee of the University of Toronto (#0029968) and all research practices followed Tri-Council Ethical Guidelines.

The aim of the initiative was to inform the development of culturally appropriate assessments (Ladson-Billings, 1995) that reflect children's home and community cultural knowledge and the development of a follow-up approach for children needing support, but not full speech-language pathology services. The initiative involved a three-step process:

1. Identifying children who might need additional supports by redesigning assessment tasks so they were culturally informed and took a dynamic assessment approach;

2. Providing supports to these children by collaborating

with Kari, an Early Childhood Educator from the children's FN community (please note that names of participants and the community are pseudonyms);

3. Describing the Standard English language abilities of the children.

We assessed the impact of this initiative by analyzing video recordings of the play-based interactions between children and Kari. In our analysis, we identified types of educator input that elicited children's multi-word responses, including responses with Standard English sentence structure of subject and predicate. We also looked for examples of children's use of target grammatical markers that the clinician had identified as needs-based on a conversational language assessment. We begin by describing the process used in efforts to create a more culturally sensitive dynamic assessment and features of the assessment. We then explain how the practice carried out by the S-LP was used to identify participants in the play-based approach and describe the approach.

Creating a Culturally-Responsive Assessment from an Existing Assessment

Team members from the clinician's practice and the university researcher's northern Canadian research project conducted a focus group with four FN educators to learn about the FNEDs and interaction practices between children and adults within their FN communities. The four female educators had a professional relationship with the clinician because of her work in their communities. They had worked as early childhood educators in their FN communities for 10–31 years. In conversations with the clinician while she worked in their communities, the four educators showed a strong awareness of their communities' language and cultural practices. They had also expressed interest in learning more about children's language development. The educators were from four different FN communities, including the community that became the focus of our study, Sinence Shores First Nation, located in an Oji-Cree community in northern Ontario. Four questions were discussed in the focus group:

1. At what age do educators expect specific English language structures (e.g., gendered pronouns, regular plurals, prepositions) to be present in the oral language of children from their community? Were the language structures we were interested in important to them?
2. What vocabulary items do educators deem to be culturally appropriate? At what age do they expect children in their community to use them?
3. How do they gather information about the children's learning?
4. What culturally appropriate activities could be incorporated into the speech and language assessments used by the clinician?

Based on the four Indigenous educators' focus group contributions, the S-LP and her team modified the vocabulary learning and expressive language portions of the Dynamic Assessment of Preschoolers' Proficiency in Learning English (DAPPLE). With these changes, children could demonstrate their morpho-syntactic knowledge in the expressive language portion using topics that were relevant to their experience.

The clinician chose the DAPPLE assessment, which was developed to distinguish language deficits from difference due to children's bilingual learning contexts (Hasson et al., 2012). Empirical research evaluating the effectiveness of the DAPPLE in differentiating between language difference and language disorder showed that bilingual children who were on an S-LP's caseload required a greater amount of prompting than did bilingual children in a control group on receptive vocabulary and sentence structure tasks (Hasson et al., 2012). Additionally, the clinician had found the assessment helpful in distinguishing difference due to FN children's FNED and individual children's core language difficulties in previous years working with young FN children.

Based on recommendations from focus group participants, the items on the vocabulary portion were substituted to make the assessment culturally relevant. As an example of a modification, the word *soap* was excluded because the community members felt it was not a word used by children 3–5 years of age. The words *hot* (in relation to fire) and *moose* were added. The stimulus pictures for the expressive language portion were modified to include familiar activities such as riding a bike and eating ice cream. The evaluation tool was implemented in a setting where children interacted with toys to allow children to feel more comfortable and to generate more naturalistic language. Additionally, prompts for the expressive tasks were developed as part of the dynamic assessment process. The DAPPLE assessment was no longer standardized because of all the modifications, so the norms provided could not be used. The dynamic assessment feature of the modified DAPPLE did inform the clinician's recommendations for either full S-LP services or participation work with Kari on the play-based intervention.

The dynamic assessment process was used when children were unable to produce the target vocabulary or sentence structure independently on the vocabulary or expressive language tasks. What the child was able to do during the posttest phase provided the clinician with

information about the child's language learning abilities. For example, to assess the child's ability to produce a subject-verb-object sentence structure, which is a sentence structure used within the FNED of that community, as explained by FN educators who participated in the focus group, the clinician modelled a sentence of that format to describe a picture (e.g., The **boy** is **riding** a **bike**). The child was then asked to describe two pictures and responses were recorded; these trials formed the pretest phase. In the teaching phase, the child was shown six additional pictures. If the child omitted a portion of the sentence (e.g., said "catching the ball" for "The **girl** is catching the ball"), a hierarchy of prompts were provided by the S-LP to assist the child in generating the subject-verb-object sentence structure. If the child was unable to formulate the subject-verb-object sentence, a model was provided for the child to imitate. Following the teaching phase, a short break was taken in which the child was asked to do a non-verbal task. After the break, in the posttest phrase, the child was shown two pictures and asked to describe what was happening. No further prompts were provided. Sample prompts can be found in **Table 1**.

The children's responses during the teaching and posttest phases indicated their ability to respond to learning experiences (e.g., how they approach learning tasks and difficulties they encounter), rather than their static level of achievement at the time that a standardized assessment is conducted (Hasson & Joffe, 2007). As such, this information was used to distinguish children who require additional exposure and support in their everyday environment from children requiring specialist intervention. Children identified as needing additional exposure were placed in the play-based language stimulation group to work with Kari. It was hoped that with exposure to consistent and focused language models, the children would acquire Standard English grammatical markers.

Context and Participating Early Childhood Educator and Children

Our clinical approach took place in the ancestral territory of Oji-Cree FN communities affiliated with the Nishnawbe Aski Nation, a provincial and territorial organization representing 49 First Nations in northern Ontario, Canada. We are grateful for the opportunity to work with community members of Sinence Shores First Nation within this territory. At the request of school leadership of Sinence Shores Elementary School, the clinician administered the version of the DAPPLE assessment tool that had vocabulary changes in accordance with focus group recommendations and included dynamic assessment prompts, with all children aged 3–4 years who were in the first year of kindergarten in November 2016.

Approximately 450 kilometers from the nearest urban centre and accessible only by plane or by winter roads when the lakes freeze over, Sinence Shores First Nation is a northern Ontario FN community with a population of approximately 3000 people. For the past 10 years, the clinician and her colleagues have provided speech and language services to the community. Treatment is primarily provided during individual and small group sessions led by an S-LP or communicative disorders assistant, with support from the participating educator, Kari. A member of

Table 1

Examples of the Dynamic Assessment Prompting Hierarchy for the Expressive Language Section of the DAPPLE

Target: The girl is catching the ball

Child's response	Prompt provided by clinician
"Girl catching ball"	This was considered the desired subject-verb-object response but the clinician would recast the utterances using articles and auxiliary "is" - "Yes, the girl is catching the ball"
"Catching the ball"	"Who is catching the ball?" [girl] "Tell me it all together" [girl catching ball]
If the student could not reproduce the sentence using the subject-verb-object, the clinician would model the full sentence for the child to imitate	"Tell me 'the girl is catching the ball'"
If the child could not imitate the full sentence, the clinician would model each component for the child to imitate	"Tell me the girl [the girl]...is catching [is catching]...the ball"

Note. DAPPLE is the Dynamic Assessment of Preschoolers' Proficiency in Learning English.

Sinence Shores First Nation, Kari has worked as a teaching assistant for 7 years and then as a full-time speech-language pathology classroom assistant for 3 years in her community's elementary school.

Although there were six children in Kari's class, three children who attended more regularly are included in our study. These include one girl, Ava, and two boys, Chase and Raiden. These three children demonstrated language learning within the dynamic assessment task and had no presumed developmental language disorder, but showed that they would benefit from increased language exposure to acquire additional Standard English grammatical markers, as requested by the school leadership. They were exposed to some Oji-Cree in the home, though English is the primary language used within the community and in school. Ava and Raiden were in the Oji-Cree Immersion kindergarten class and Chase was in the English kindergarten class. The elementary school has a population of approximately 350 students in K4 (children enter during the year in which they turn 4 years old) to Grade 6.

Determining Language Goals for Children Working with Kari

To determine language goals for each child that had been recommended to work with Kari, the clinician conducted a conversational assessment. She invited the children to talk about toy objects and photographs in order to elicit grammatical structures, such as prepositions, plural nouns, and subject and object gendered pronouns. The chosen toys and photographs reflected the topics that the four educators identified in focus group conversations as familiar to the children. If children did not comment on their environment, the clinician asked questions such as "What do you see on the table?" to provide additional opportunities for the child to use the target grammatical structures. Those structures that children did not use or used incorrectly became the goals for each child. The clinician drew on her knowledge of Sinence Shores' FNED when setting goals, aware that some of the children's grammatical structures reflected their community's ways with words (Bovaird Wawrykow, 2011). The Sinence Shores' FNED has variations specific to the language users of Sinence Shores First Nation (e.g., using determiners preceding proper nouns). The clinician repeated this procedure at the end of the year to determine if children had achieved the goals. If the children used the structures at least three times correctly in the prompted conversation, the clinician assessed the goal as being met. If the children used the structure once correctly, the clinician assessed the goal as being partly met/the target grammatical structure was emerging.

Play-Based Approach

The play-based approach is based on a view of play as a context for children's language development and overall learning (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009; Wood, 2013). Characteristics that appear frequently in definitions of play include space for creativity (e.g., creating imaginary roles and contexts and assigning new meanings/roles to objects), as well as high levels of engagement, exploration of objects, problem-solving, and relational activity (Moyles, 2013; Wood, 2010). These characteristics were considered when Kari planned the play-based intervention.

Kari implemented the play-based intervention weekly across 10 weeks. The clinician gave Kari the Standard English grammatical marker goals for each child based on the conversational assessments. She asked Kari to provide exposure to one grammatical marker (e.g., either gendered pronouns, prepositions, plural s) each week to make it easier for her to plan. Kari could focus on one marker as she planned play activities with available toys and construction materials. Kari was asked to engage the children in play, emphasizing the grammatical marker in her sentences and recasting or rephrasing their sentences as needed (e.g., if the child said "him running" she rephrased/recast what was said, "Yes, he is running"). This *conversational recast* method involved repeating "some or all of the child's words and add[ing] new information while maintaining the basic meaning expressed by the child" (Cleave, Becker, Curran, Owen Van Horne, & Fey, 2015, p. 237). The recasting provided a model of a way to express the child's meaning in Standard English (Cleave et al., 2015; Edwards & Rosin, 2016), while not giving the child the impression that the community's FNED is "wrong" (Wheeler & Swords, 2004).

In the sessions, the children interacted with play materials while Kari asked questions and prompted language related to the play. At the beginning of each play session, Kari brought out play materials and placed them in front of the children who were seated at the table. While the children engaged in free play, they talked informally to Kari and to one another. Kari also encouraged the use of specific grammatical markers (e.g., plural nouns, gendered subject pronouns) by asking questions about what they or their peers were doing and about the children's lives, as shown in the findings section.

Methods for Interpreting Video-Recordings of Play-Based Interactions

On three occasions in the middle of the intervention period, Kari set up an iPod on a tripod in her speech-language support room so that it captured the activity and language of the three children as they interacted with

play materials, each other, and with her. At this point, Kari had had a few weeks to apply what she had learned from the clinician about play-based support of the children's language. The video-recording did not continue beyond this period because of the irregularity of children's attendance. The videos were each approximately 25 minutes in length, as Kari recorded the entire session with children. The videos were transcribed using the *Jeffersonian Transcription System* (http://mis.ucd.ie/wiki/JeffersonianTranscription) with a description of Kari's and each child's language and actions. **Table 2** summarizes the play context in each of the recorded sessions, which were taken over a period of 3 weeks.

The unit of analysis was an utterance, which we defined as a spoken word, statement, or vocal sound with a single purpose. We analyzed 242 utterances of the focus children and 238 utterances of Kari within the three videos. To begin the process, we identified participating children's use of two target Standard English language structures (e.g., regular plurals and third-person subject and object pronouns). We tallied the frequency of children's conventional and non-conventional use of the markers.

We then described the function of each of Kari's utterances. For instance, when she said things like, "[That's] how you go home when you go home after school, right?," we described the purpose of such utterances as providing or seeking affirmation. In this phase of our analysis, we developed seven codes describing the function of Kari's utterances. **Table 3** provides a detailed description of each of these functions with examples of each. We called these "educator prompt" codes. We calculated frequencies of the educator prompt codes and identified whether each type of prompt elicited a one-word response (e.g., saying "yellow" after being asked to identify the colour of an object) or multiple-word responses. We determined the mean length of utterance of each multiple-word response and identified multiple-word utterances that included Standard English subject-predicate structures (e.g., "I want to put this right here"). We also determined which educator prompts elicited expected use of the two target grammatical markers.

Table 2

Context of Analyzed Videos

Video title	Focus children	Play materials
Connect Four™	Chase and Ava	Connect Four™ game, a toy bridge, a pool, a box, a lily pad, toy animals, and a car
Play with PlayDoh™	Raiden, Chase, and Ava	Clay and toy animals
Play with Animals	Raiden, Chase, and Ava	Toy animals, paint, and PlayDoh™

Table 3

Educator Prompt Codes with Examples

Educator prompt codes	Examples
Asking a question about children's lives	Kari: Where do you sleep?
Asking a question about play context	Kari: What kind of animals are those?
Providing and seeking affirmation	Kari: Yes, we can play with the frogs Kari: Okay?
Asking for clarification of child's utterance	Kari: Hmm?
Directing children's behaviour	Kari: Sit down
Giving information	Kari: It's called a pilot
Asking/encouraging children to provide examples of the target grammatical structures	Kari: This is a...?

Results

We report our analysis of the types of input provided by Kari that elicited three children's use of one-word and multiple-word utterances, utterances that included subjects and predicates, and the mean length of multiple-word utterances.

Educator Prompts and Children's Responses in Play-Based Context

As shown in **Table 4**, Kari's most frequent prompts were for the purpose of asking questions about children's lives and about the play context. These prompts did not elicit the greatest percentage of multiple-word responses, however. Children's multiple-word responses, whether they included both a subject and predicate or not, were usually 3–4 words in length.

We provide examples of Kari's prompts and children's responses, beginning with Kari's prompts that elicited the greatest percentages of children's multiple-word responses—those with the purposes of providing or seeking affirmation, giving information, and directing children's behaviour.

When Kari provided or sought affirmation, the children almost always expanded on what they or others had previously said using multiple-word utterances for the purpose of explaining or expressing a need. For example, Kari explained to the children at the end of one of the play sessions, "You guys can come play with the Play-doh™ again when you guys come [back] in, okay?" Chase replied, "I played with frogs when I was . . ." but then stopped his sentence. After Kari provided affirmation, "Yes, we can play with frogs," Chase asked, "When we come back?" Kari provided Chase with affirmation once again saying, "mmhm." Chase then exclaimed, "We're gonna play with frogs!" Many of the children's multiple-word responses used a subject and a predicate using FNED or Standard English. For example, in an exchange while children and Kari played with PlayDoh™, Kari repeated, "Pizza" after Raiden had said his favourite food was pizza. Following Kari's affirmation, Raiden used the theme of his favourite things to say, "And my favourite game is the Minecraft™." In some cases, children's responses to Kari's affirmations involved disagreeing with what had been said. For example, Chase's response to Kari's question, "Who swims in ponds?" was "Frogs." After Kari affirmed by saying, "Frogs," Ava corrected them, giving her version of where frogs swim: "No, frogs swim in the lake."

Though there were few instances when Kari gave information about a concept or phenomenon related to the play context or to children's lives, the children almost always responded with more than one word and often used short sentences (mean length of utterance of 3.8). For example, Kari explained a process of using primary colours to create secondary colours while children were playing with PlayDoh™: "See, when you mix blue and yellow, it turns into

Table 4

Purposes of Kari's Utterances and Lengths/Conventional Sentence Structure of Elicited Verbal Responses from Children

Purposes of Kari's utterances (*n* = 238 utterances)	Children's utterances (*n* = 242 utterances)		
	% of One-word responses	% of Multiple words (mean length of utterance in number of words)	% of Multiple-word responses with subject and predicate
Providing and seeking affirmation (*n* = 38)	5.3	94.7 (4.3)	63.2
Giving information (*n* = 6)	10.0	90.0 (3.8)	81.8
Directing children's behaviour (*n* = 13)	15.4	84.6 (4.5)	61.5
Asking questions about children's lives (*n* = 92)	38.0	62.0 (3.7)	26.0
Asking questions about play context (*n* = 89)	48.3	51.7 (3.9)	23.6

green!" Chase's response, for the purpose of expressing a need, included a subject and a predicate: "I need blue." Kari also provided information by defining concepts. For example, she explained, "Breakfast is what you eat in the morning. When you get up, when you eat, that's breakfast." Raiden responded by repeating information about breakfast that was salient to him, using a phrasal verb: "When you get up."

When Kari directed children's behaviour, children responded most frequently with conventional sentences. The social needs of the situation seemed to create a need for longer responses (mean length of utterance = 4.5), as children's responses usually were for the purpose of justifying their own or other children's actions. For example, when Kari directed Chase to "Stay there," rather than going toward the door, Ava provided a rationale for Chase's actions with a complete sentence: "He's just going to shut the door." Similarly, when Kari directed, "Come on, Raiden! You've got to help me," Raiden replied, "I don't want my hands in there," giving a rationale for why he was not helping Kari tidy up the PlayDoh™.

Although they were Kari's most frequently used prompts, asking children questions about the play context or about children's lives frequently elicited children's one-word responses or multiple-word responses that were not complete sentences. The questions Kari asked in the play context were often closed-ended, such as "What colour is the other?", to which Ava responded "Yellow." Questions about children's real lives often elicited multiple-word responses in the form of Wh-complements (with elision) or predicates. For example, when Kari asked, "When do you go to school?", Raiden replied, "When the bus comes." To Kari's question, "Did you go sliding at all this year?", Chase replied, "Yeah, go on the big big hill." As shown in previous research where elision in response to questions was common (e.g., Johnston, Miller, Curtiss, & Tallal, 1993), the use of full sentences was not required in order for children to provide the information requested in Kari's question.

Children's Use of Target Grammatical Markers

In the play-based context. In the ongoing conversations with Kari and with each other while playing with toys and PlayDoh™, the three children used Standard English plural noun forms in 100% of obligatory contexts for use of plural nouns. For example, when Kari explained that one of the play sessions was coming to an end, Raiden said, "Wait, I will put my colours down first." In another play session, Chase gestured toward a toy box on the table, exclaiming, "I need my Ninja Turtles in there!"

The children did not use gendered pronouns in the three play-based sessions except in response to Kari's questions: "Would you say your mommy is a she or a he?" and "Is your daddy a she or a he?" Ava and Chase answered the questions with the correct subject pronoun. The play-based contexts did not appear to provide opportunities for children to use third-person subject and object pronouns in ongoing conversation with peers and with Kari.

End-of-year sentence completion probes in conversation with clinician. In an assessment conversation where they completed sentence probes about pictures and videos with the clinician at the end of the school year, all three children used regular plurals. Their use of third-person gendered subject and object pronouns was not consistent, however. This difficulty in acquiring the use of third person pronouns was a language pattern that the clinician found to be true for many children in Sinence Shores Elementary School. This observation has been reported by Peltier (2011) and described by the four educators who participated in the focus group informing the development of the culturally sensitive assessment, as reflective of the absence of gender terms in the Indigenous language.

Discussion

Dynamic Assessment Practices

We acknowledge the conflict of interest inherent in an S-LP reporting on a clinical approach that she has carried out, but feel that the collaboration with university researchers to analyze video recordings of the intervention helps to mitigate the effects of this conflict. Additionally, because of the limitations of a very small sample size, lack of a control group of children who performed in a similar manner on the dynamic assessment modifications that the clinician made to the DAPPLE assessment, and our inability to confirm that results of the dynamic assessment accurately identified whether each of the three children's use of language was the result of using their community's FNED, we cannot authoritatively assert the efficacy of the dynamic assessment. We also recognize that the practice for determining achievement of target language structures (the structures were used three times in a prompted conversation with the clinician) does not set a high standard allowing us to claim with confidence that goals have been achieved.

With these limitations in mind, we propose that the dynamic assessment shows potential as a tool for identifying children who can benefit from increased exposure to specific Standard English language forms in a play-based setting, such as that collaboratively created by Kari and the clinician. This potential requires long-term follow-up with participating children to confirm that their

language reflects the FNED of their community rather than a developmental language disorder. Our findings are consistent with those of other studies of dynamic assessments of children's language (e.g., Asad et al., 2013) and indicate that further research to determine the assessment's usefulness across a larger population is warranted. Such research must begin with a recognition of the sociocultural and linguistic diversity and unique FNED from community to community. FNEDs are evident in the home and community talk of Indigenous peoples living on a FN territory, as well as those residing in rural or urban contexts (Peltier, 2011). We propose that the model for modifying existing assessments that is presented in this paper could be applied across many FN contexts, as well as urban and rural early learning contexts with FN children.

Additionally, although modifications to the assessment tool were based on focus group data from four FN educators (including Kari), the design of our research study does not allow us to make authoritative claims of cultural appropriateness of the dynamic assessment. In many respects, our practice is another example of what Peltier (2011) called "mak[ing] do with existing assessment and intervention tools that are available" (p. 133), as we have simply tinkered with the existing tool. In agreement with Peltier, we believe it is necessary for S-LPs to conduct further research to develop assessment tools and approaches that are culturally appropriate for Indigenous children. The need for approaches that address this issue is underscored in survey results revealing that the largest proportion of diagnoses of children's special needs in 59 Aboriginal early learning and child care centres are speech-language related (de Leeuw, Fiske, & Greenwood, 2002).

Play-Based Language Stimulation with Local FN Educator

Our clinical approach involved the use of a play-based language stimulation group for Indigenous children who demonstrated language learning potential using a dynamic assessment protocol. There, they met weekly with Kari, an Indigenous educator from their community, to engage in play-based activities. As our findings show, the interactions with each other, with Kari, and with play materials in the play-based language stimulation group created authentic communicative situations for children to use language for purposes such as explaining their own and others' actions, communicating needs, elaborating on their own or others' responses to questions, and asking questions. They engaged in "real talk" to carry out intentions and fulfill needs (Boyd & Galda, 2011; Halliday, 1978).

When using language, participating children drew on familiar perspectives and ways of interacting. The play interactions with both peers and Kari provided a safe and motivational context for children's language development (Bodrova & Leong, 2007). They were in the company of other children and Kari, all who were from their community and with whom they had established, comfortable relationships. In these respects, the play-based small group setting was culturally appropriate for supporting the children's language (Eriks-Brophy, 2014).The children participating in our study used the target language structure of plural nouns when contributing to the small-group conversation in the various play settings, using plural nouns to communicate their needs and wants. They also demonstrated increased understanding and use of these target language forms in postintervention assessments.

Increased exposure to the Standard English forms, through Kari's recasting of children's uses of non-standard grammatical patterns (Edwards & Rosin, 2016) in weekly play-based sessions, appears to have supported children's use of this target language structure. Prompts that elicited longer and more diverse utterances were for the purposes of providing or seeking affirmation, giving information, and directing children's behaviour. Kari, an adult from their community, asked questions inviting children to talk about what they knew and had experienced, and affirmed what they were saying. Because Kari also lived in the community and knew the children's families, her questions and follow-up affirmations and extensions reflected the community's culture and ways of interacting, providing children with opportunities to co-construct cultural knowledge and identities as competent members of their community (Cekaite, Blum-Kulka, Grøver, & Teubal, 2014). She also was aware of the children's use of FNED in the grammatical patterns used in their responses to questions and contributions to the small group conversation.

The children did not, however, use gendered subject and object pronouns in their play-based interactions and they did not show mastery in their use of gendered pronouns in the year-end assessment with the clinician. In the future, we plan to introduce storytelling in the play-based context. Following Kari's storytelling using dolls that she identifies as female and male as props, she will invite children's storytelling using third-person gendered subject and object pronouns. Storytelling is also a culturally appropriate context for children's language use, as it is important within oral traditions of Indigenous cultures in Canada and around the world (Archibald, 2008; Barrett & Cocq, 2019; Fitznor, 2019).

We recognize that the limited sample and data set (with only a 3-week period during which interactions were video-recorded and a 10-week intervention period in total) do not allow us to claim with great confidence that children's

language changed as a result of the play-based intervention. Recommendations by Cleave et al. (2015) conducting a systematic review and meta-analysis of research on recasts in language intervention are pertinent to our research study. Further pre-intervention and post-intervention measures with ongoing data collection over a longer intervention period, together with a more systematically-developed and documented protocol for training the FN S-LP assistant, are needed to provide reliable and valid evidence of the outcomes of the recast interventions such as the one we have reported in this paper.

In conclusion, we propose that modifying existing assessments, such as the DAPPLE, to include dynamic assessment practices and vocabulary based on input from local Indigenous educators, has potential to provide S-LPs with useful information for identifying children who may benefit from play-based interventions and not require full S-LP services. These assessment practices, together with play-based small group interactions guided by a local FN assistant who collaborates with an S-LP, have potential to offer a viable framework for culturally sensitive speech and language services for young FN children. Our experience underscores the need to develop long-term relationships between FN community S-LP assistants and clinicians who support their work with children in their community. Since conducting this research, the clinician has been providing ongoing training and mentoring, a process that we recommend to strengthen the effectiveness of the intervention. Although further research with additional controls is needed, we suggest that clinicians could consider these clinical approaches for culturally sensitive assessments and language stimulation in collaboration with FN community members.

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