

The Chisasibi Child Language Acquisition Study



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Roadmap

1. **The CCLAS project:**

When, where, what, why, how, who ... ?

2. **What we've found** so far

3. **Applications for the community**

Now and for the future



*Photo: The Michuap, Chisasibi's Community Centre
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Our gratitude and commitment to the families

We are **deeply thankful** to the families who were a part of CCLAS

We are firmly committed to **protecting their privacy**

No pictures or video of children appear here,
or anywhere else in the **public domain**

We give the children **codenames**:

The people working with recordings don't know the real names

We are also grateful for the following

Funding

The Social Sciences and Humanities Council (SSHRC) for Canada:
2004-08; 2008-12; 2013-2020

The Cree School Board (2005-6)

Infrastructure support

The Cree School Board

Anjabowa Childcare Centre

Who is involved?

Julie Brittain, Associate Professor

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Marguerite MacKenzie, Professor Emerita

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Ryan Henke, PhD student

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What is CCLAS?

A “naturalistic” study of **first language (L1) acquisition**

Regular recordings of children interacting with others in **natural situations**

- Ex) Video-record for 30-45 mins, ~every 2 weeks, for 30 months

Analyzing child production and child-directed speech

CCLAS recorded from **November 2004 to April 2007**: Children aged **~2 to 5;10**

What is CCLAS?

We recorded **three children** for about 30 months

“Ani” 1;09 to 4;03

“Daisy” 3;08 to 5;10

“Billy” 4;04 to 5;10

All of the recordings were made by **Project Manager, Darlene Bearskin**

Why did CCLAS start?

Marguerite MacKenzie and Julie Brittain - experience working with Cree and related languages

Interest expressed by **Cree School Board and others**

- Suspected over-referral of children to SLP services

Cree has complex word structure, unlike many languages commonly studied

- Very different from English, French, Spanish, Japanese, etc.

Why did CCLAS start?

Cree structure is **very different** from English

ᓃᓄᓐ	niiwit	‘my bag’
ᓃᓄᓐᓄ	niiwitish	‘my little bag’
ᓃᓄᓐᓄᓂᓄ	niiwitishinân	‘our little bag’
ᓃᓄᓐᓄᓂᓄᓄ	niiwitishinânh	‘our little bags’

Why did CCLAS start?

Decades of research shows children follow patterns of English development

- | | |
|---------------------------|--|
| 1. -ing | he's crying g |
| 2. plural -s | two cats s |
| 3. possessive -'s | the cat' s tail |
| 4. the, a | the dog, a dog |
| 5. past tense -ed | she shouted ed |
| 6. 3rd person singular -s | he runs s |
| 7. "be" | he is running, she was running |

No such milestones exist for Cree (or any First Nations language)

What has CCLAS researched so far?

Segmental development: When do children learn the **speech sounds** of Cree?

Stress: How do children learn to put the right **emphasis** on words?

Nouns: How do children learn **possessives**?

Demonstratives: How do they learn words like ᐃ uu 'this' and ᐱ an 'that'?

Verbs: How do children learn **types of verbs** and **parts of verbs**?

Language mixing: What about **English** in the children's language?

Stress (a.k.a., accent): What have we found so far?

Very accurate with **final stress** Ex) ʌŋʰŋ° pichihtin 'It falls down'

- Age 2;02: 92.9% accurate → age 2;08 and onward: **100% accurate**

Other words **more difficult**, but lots of improvement over time

Words like: ɓʰɓŋ° kaahkaachiu 'raven'

- Age 2;02: 62.5% accurate → age 4;01: **84.6% accurate**

Words like: ʰɔŋɓ pwaachikii 'bogeyman'

- Age 2;02: 14.3% → age 4;01: **75% accurate**

Nouns: What have we found so far?

Age 2;01: Starts with **no nouns** when expressing possessives

- ᄆᄃᄇ Niiyi **uu** 'This is mine'

Age 2;07: Nouns appear in possessives, but **missing pieces**

- ᄃᄉ ᄇᄆᄆᄆ Dora **piyichîs** 'Dora's **pants**' vs ...
- ᄃᄉ ᄃᄇᄆᄆᄆᄆ Dora u**piyichîsimh** 'Dora's **pants**'

Age 3;08, the pieces are there: ᄆᄆᄆᄆᄆ **nimisichisin** 'my shoe'

We've only analyzed a handful of recordings here, so we're doing more work

Verbs

Verbs (***action*** words) are **extremely important** in Cree

Some sentences have **only verbs** ... or mostly verbs

Cree has **different categories** of verbs, depending on different factors

·ᑲᐱᑲ

Waapiu

'S/he **sees**'

·ᑲᐱᑲᑲᑲ

Waapihtim

'S/he **sees** it'

·ᑲᐱᑲᑲᑲᑲ

Waapimaau

'S/he **sees** her/him/it'

Verbs

Verbs can also be **longer and more complex** than English, French, etc.

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Chi**waapi**maanaanaachichaanichii

'Maybe we (you and I) **see** them'

How do children learn different **types** of verbs and **parts** of verbs?

Verbs: What have we found so far?

Children hear lots of verbs from an adult:

- Very frequently **questions** and **commands**
- They hear lots of **speech modeling** → how to say things the Cree way

In early speech, most frequently attempts verbs **without objects**

·◁∧▷ **Waapiu** 'S/he **sees**' instead of...

·◁∧LD▷ **Waapimaau** 'S/he **sees** her/him/it'

Most frequently verbs with **animate subjects**

◁||Ċ^c âhtât '**S/he** is there' instead of ...

ΓΓ^e michin '**It** is dirty'

Verbs: What have we found so far?

Two developmental stages:

1. 2;01 to 3;04: Memorizing and using **chunks of verbs** as whole units
2. After 3;04: Starting to **apply pieces** of more verbs in more adult-like way

Stress plays a crucial role:

1. **Chunks** of verbs center on stressed syllables

Ex) ÌḶ mâ**tuu** 'S/he cries' → Says **tuu**

2. Most often produces **suffixes** that occur in **stressed** positions

Language mixing

Lots of people are concerned that children in Chisasibi are **speaking more English**

Sometimes they **replace** Cree words but sometimes **mixing** Cree + English

Ex) n**iphone**im 'my phone'

Ex) check**uu** 'S/he is checking'

How is **English** appearing in the **CCLAS children's** speech?

Language mixing: What have we found so far?

Cree and English have **different sound systems**

Ex) English has sounds like *f*ans, *v*ans, *th*is, *th*ick

Ex) English has sound combinations like *f*irst and *st*rength

Ex) English never has [h] before a [k]: ᑭᑦᑲᑦᑲᑦᑲᑦ muuh**k**umaan 'knife'

Major finding: Child develops one sound system that is **Cree dominant**

In other words, English words go **through a Cree filter**

Language mixing: What have we found so far?

Rarely attempts non-Cree speech sounds like *f*ans, *v*ans, *th*is, *th*ick

- Usually just deletes them
- Or makes them fit Cree rules: ex) **f** → **p**

Sounds and sound combinations found only in English develop much **later** or **not at all**

- Ex) Age 3;08: Attempts to say words like *si*ng
- But on-target only **2/13 times** ... usually says *si*n or *si*k

So Cree dominates the **sound portion** of language abilities

Language mixing: What have we found so far?

Aged 4;06 – 6;00: **How much English** is in child speech? (**2,756 utterances**)

80.1 percent contain **no English elements** at all

12.5 percent **mix** Cree and English

Ex) ᑦᑭᑭᑦᑭᑦ floorihch Chikimuyiw **floor**ihch 'It is stuck to the **floor**'

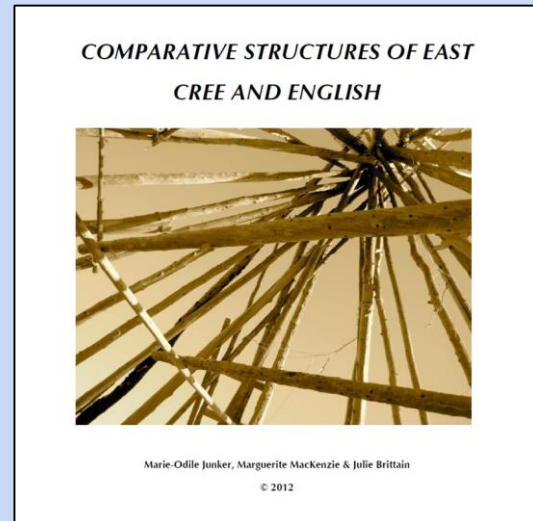
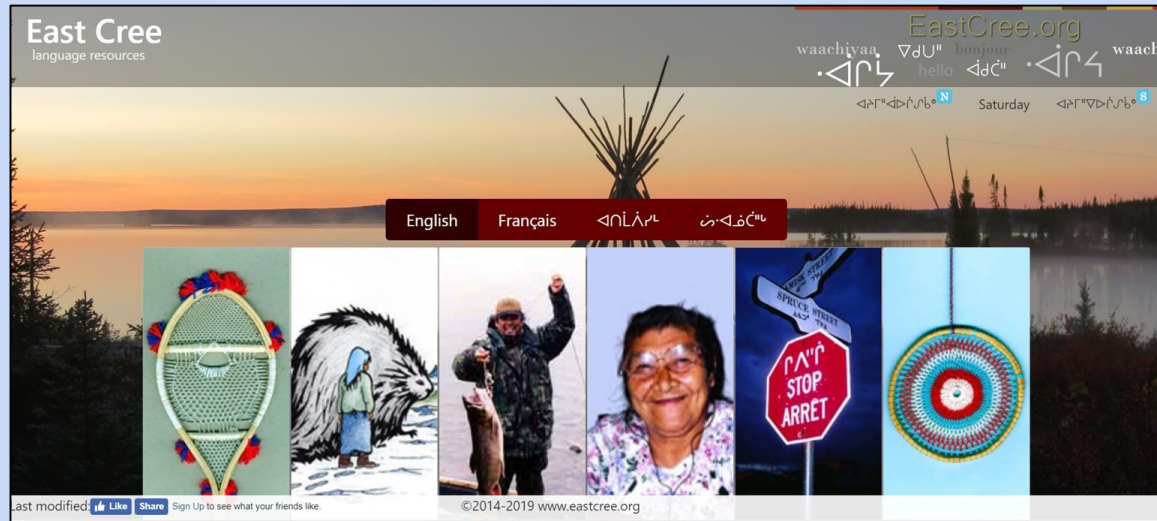
Only 7.4 percent are **English-only** ... and most are single-word utterances

Speaks Cree fluently w/ occasional English nouns, adjectives, adverbs

Applications for the community

How can CCLAS research be put to use for the community? Some examples ...

We've already **contributed to language-teaching resources**,
and we're currently working on a Northern East Cree **lesson book**



Applications for the community

We're also working on providing resources for **supporting child development**

Speech-language pathologists (SLPs) in Chisasibi need tools and methods that are appropriate for Cree language and culture

And these need to be **easy-to-use** and **effective**

For example ...

Applications for the community

We've developed the **Resonance Screening Tool** for Northern East Cree

It's tailored for the **words**
and **sounds of Cree**

Can help SLPs diagnosis
resonance disorders
in young children

Client Name	_____	
Client Age	_____	
Examiner	_____	Date _____
Target	IPA	Child Production
/p/ word initial		
10. piisim	[pisam]	_____
11. paai	[pã]	_____
12. pichiu	[pɛdzo]	_____
/p/ word final		
13. shiishiip	[ʃiʃipʰ]	_____

Available online through the **Cree Health Board**

Applications for the community

Future projects include:

1. Charting typical **language milestones** in development:
Sounds, words, sentence structures
2. Finding ways to **objectively measure language development** over time
3. Creating a **screening toolkit** and word/sentence repetition **tools**,
specifically tailored for Northern East Cree--not English or French
4. Providing SLPs with easy-to-use **common Cree words/phrases**,
transcribed using the **International Phonetic Alphabet**

Again, our acknowledgements and thanks to ...

- The **families** who made CCLAS possible by taking part, and the **community at large** for ongoing support
- The **Nation of Chisasibi**
- The **Cree School Board of Québec**
- **Anjabowa Childcare Centres** in Chisasibi
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We'd love to hear from you

Thank you for your time, and please let us know what you think

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