

In search of an effective method of measuring First Nations children's speech and language development.

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Acronyms

- FN - First Nations
- NFN - Non-First Nations
- DIF - Differential Item Functioning
- FNED – First Nations English Dialect
- EL – Early Learning
- RRDSB – Rainy River District School Board
- FNMIC – First Nations Metis Inuit Collaborative



Research Questions

- How difficult are test items for children of either group (FN and NFN)?
- Which test items are differentially difficult, before and after controlling for children's overall performance on each subtest?
- What features and methods of administration of the test items might account for the differential difficulty?

Fluharty Preschool Speech and Language Screening Test-2

- **Does this screening test provide an effective and meaningful profile of First Nations children's speech and language development?**



Target: Rainy River District

- **Population: 20,370.**
- **10 First Nations (FN) Communities**
- **Rainy River District School Board (RRDSB) Student Composition:**
 - Aboriginal – FN - 875**
 - Aboriginal – Inuit – 1**
 - Aboriginal – Metis – 179**
 - Non-Aboriginal – 1924**





Study Methodology

- Secondary analysis on data collected 2009, 2010 and 2011 screening at the RRDSB.
- Differential Item Functioning (DIF) to determine possible test item bias.
- The DIF detected items as well as some near significant DIF items were interpreted.
- RRDSB Native Language Curriculum Coordinator assisted with the interpretation based on his extensive knowledge of the FN children's home language, culture and worldview.




The Importance of this Study

- Speech and language difficulties are one of the most prevalent issues with young FN children today.
- FN children may be wrongfully diagnosed with speech and language disorders and/or their skills and abilities may be underestimated based on current methods of measurement.
- It may be sending the child on a misguided trajectory for their school career and future career.
- The SLP profession is not confident in the results of their current methods of evaluating FN children.
- Early speech and language development impacts literacy development.
- The lack of this kind of research in Canada.



Information, Literature and Research that impact this study.

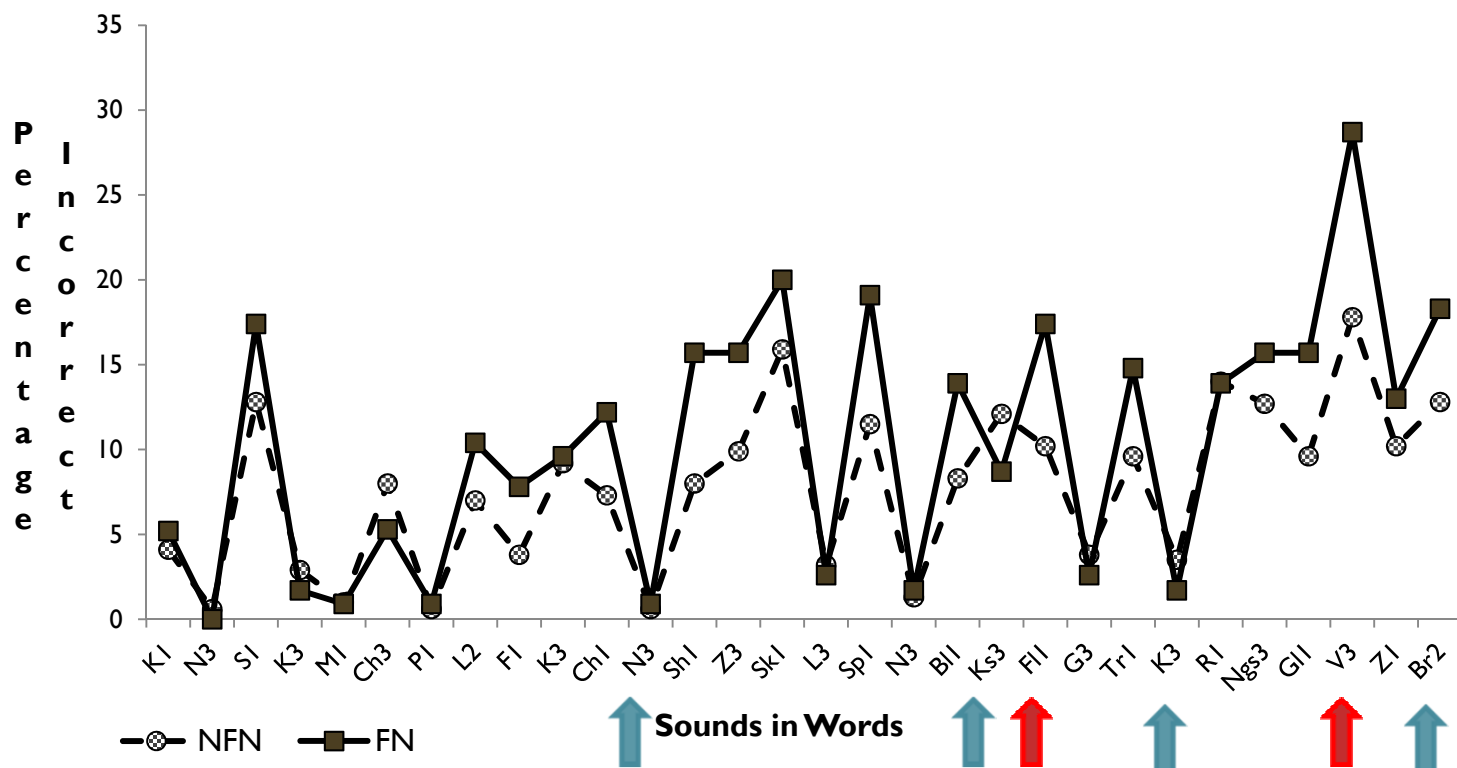
1. **Oral tradition through local perspective**
(p.c. J. Jones & N. Jones, 2013).
2. **FN Language central to living and being**
(AFN, 1990; Treuer, 2012).
3. **Ancestral language influences
FNED/Characteristics of FNEDs**
(Ball et al, 2006; Cummins et al, 2006; Peltier, 2011; Wawrykow, 2012).
4. **Very little empirical research in Canada**
5. **History continues to influence the
education for FN – Eurocentric as opposed
to Holistic way of learning**
(Antoine, 2000; Ball, 2008; Pascal, 2009).

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6. **Assigning a specific learning style to an entire ethnic group causes misrepresentation**
(Chrisjohn & Peters, 1989; Swisher, 1991).
 7. **Methods of teaching in the EYs are changing.**
(Carr, 2011; Dweck, 2006; Epstein, 2007; Ontario MEd, 2010, 2013, 2014).
 8. **What is lacking in Standardized Testing?**
(Dockrell, 2001; Hurton, 2009; Pullin, 2008; Tzuriel, 2001; Vygotsky, 1978)
 9. **Promising non-standardized assessment: dynamic, observational, learning stories, narrative/storytelling**
(Carr & Lee, 2012; Epstein, 2007; Gillam et al, 1999; Gould, 2008;).
 10. **Is it a language difference or language disorder?**
(Gould, 2008; McGregor et al, 1997; Pearce & Williams, 2013; Toohill et al, 2012).
 11. **True and authentic assessment involves FN families and their communities**
(Ball, 2005; Ball & Lewis, 2006; Gould, 2008; Peltier, 2009).

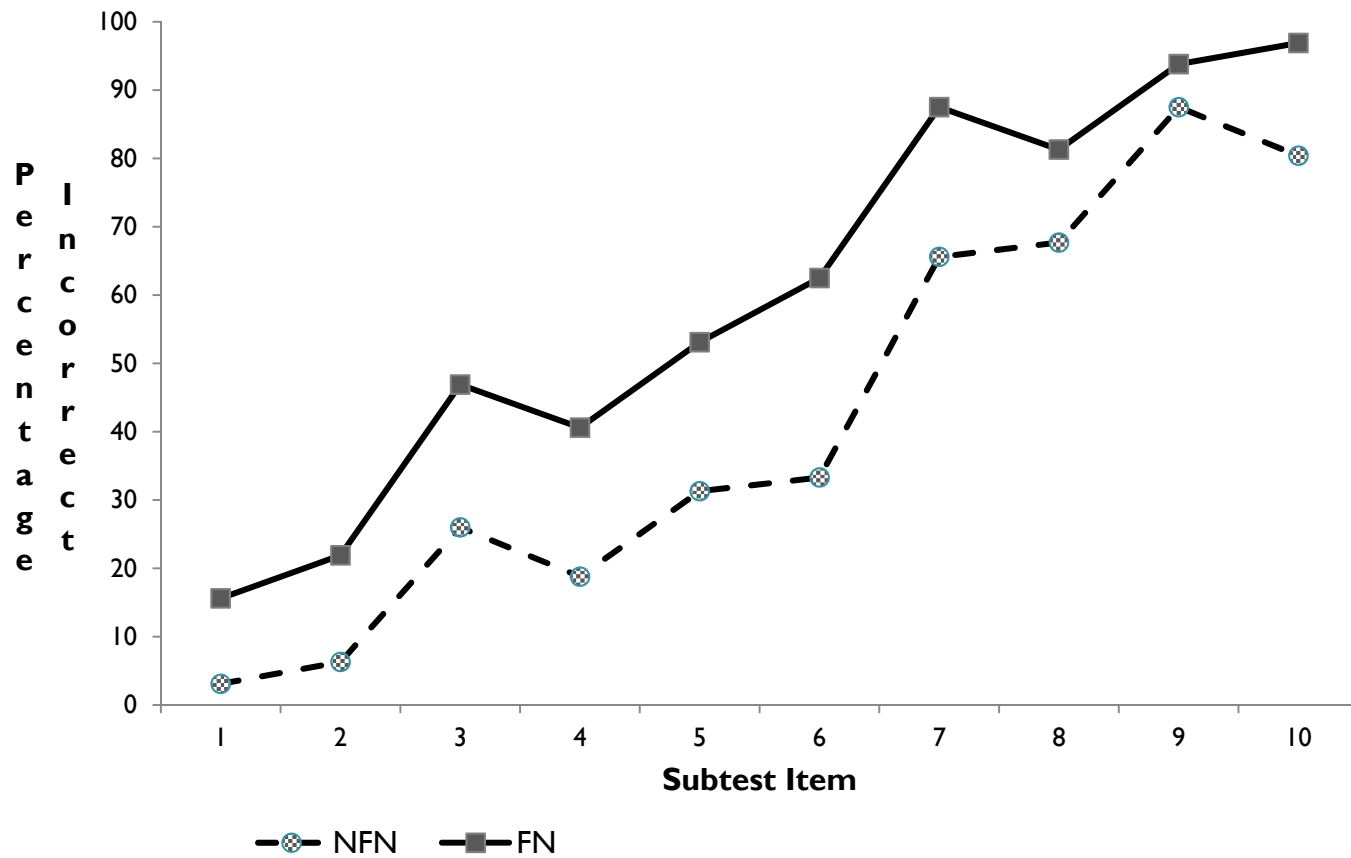
Articulation Subtest

↑ Uniform DIF

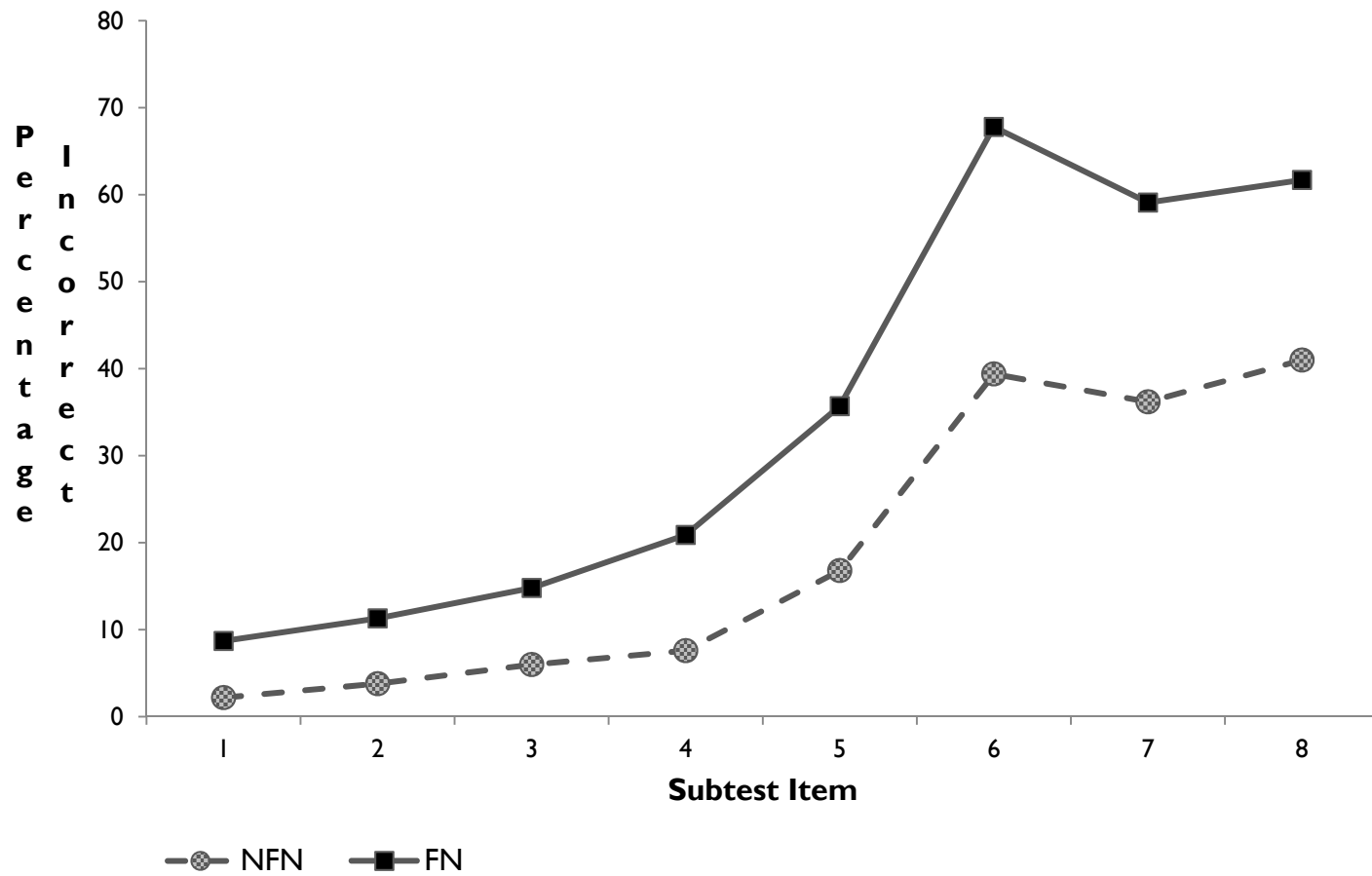
↑ Non-Uniform DIF



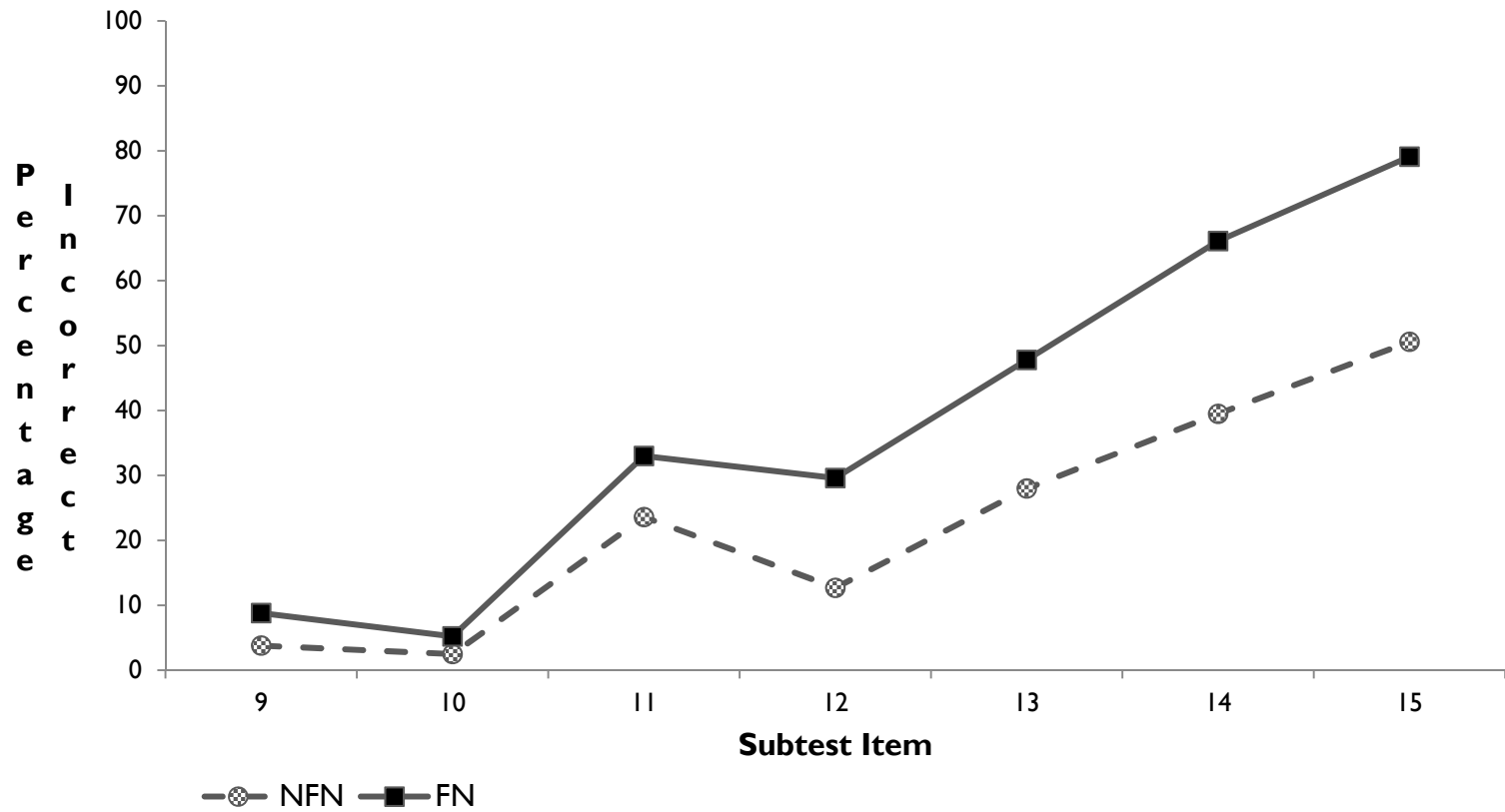
Repeating Sentences



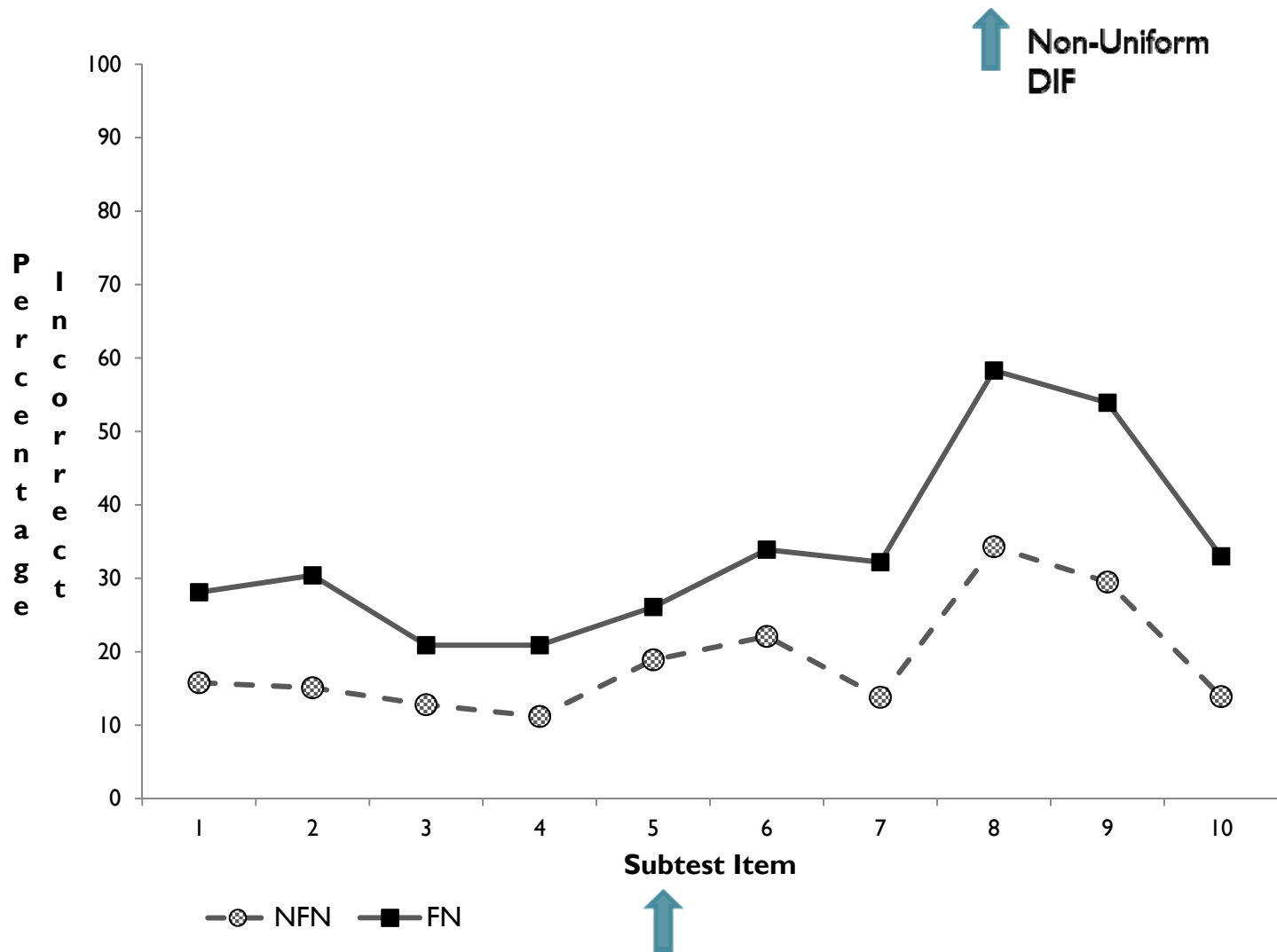
Following Directives



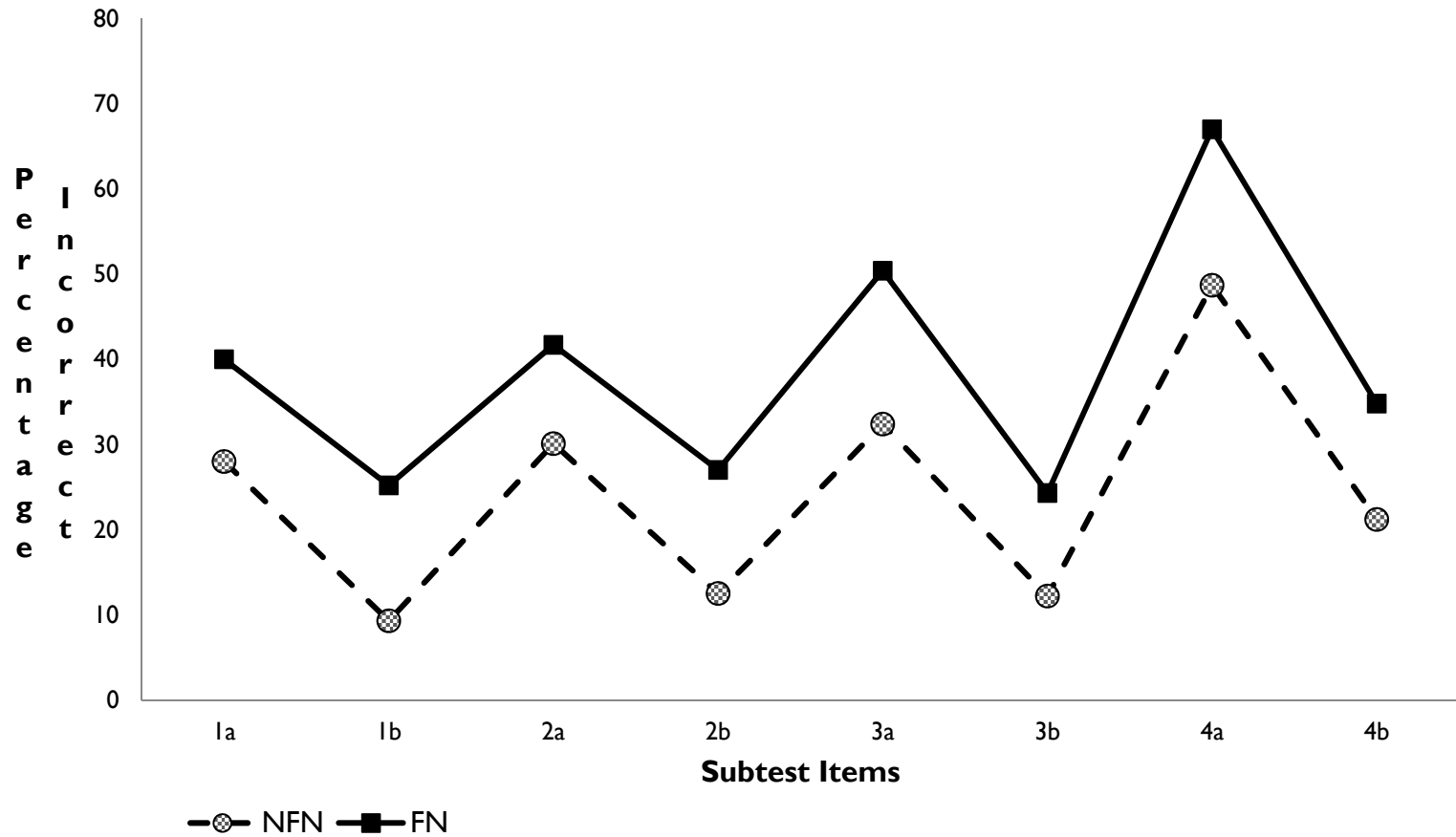
Answering Questions



Describing Actions



Sequencing Events



Six Phonology/Sound Items
(Articulation subtest)

- Uniform DIF in favour of NFN group **glove** and **flag**
- Non-uniform DIF exhibited with **spoon**, **truck** and **blocks** and **zebra**

One Language item
(Describing Actions subtest)

- Non-uniform DIF for “**crawling.**”

Differential Item Functioning Analysis Results

Repeating Sentences Subtest

- Before washing our hands, we have to turn on the faucet in the sink.
- If *she* falls down, *she* may get hurt.

Following Directives Subtest

- Stack three yellow blocks over *there* and stack 3 white blocks over *here*.

Answering Questions Subtest

- How can you tell if your shoes were on the wrong feet?
- What could you do if you forgot what (the teacher/your mother) said and you needed to remember?

Near significant DIF test items may illustrate syntax, semantic and worldview differences in languages.



Discussion / Interpretation of Results

Measures incorporating the following and SLPs with this knowledge may be more effective in determining FN children's strengths, needs and next steps.

- Less compound, conditional complex sentences.
- Awareness of Ojibwe sound system – f,l,v.
- Differences in language structure – verbs vs nouns, wh-questions, rules of combining.
- Understanding local FN cultural and worldview perspective.
- Involving parents, families and community members into the assessment process.
- Incorporating prompting and non-standardized measures to allow different ways of demonstrating knowledge and pinpoint language differences instead of language disorders.
- Storytelling component.
- Observational assessment. (holistic, authentic)



Study Limitations

- May not transfer to other FN dialects or other Aboriginal communities.
- Analyses involved one standardized Speech/Language Screen.
- Not enough FN community collaboration (focus groups) for interpretation.

Study Impact

- First step in development of new tool or adaptation of this screening tool or others.
- Implications for intervention.
- Pre-service training.
- Influence other professions to critically evaluate their practices.



Future Research

- Employ qualitative methodology to further analyze quantitative results collected.
- Research differences in learning through EL classrooms based on the new method of teaching and allowing for exploration and inquiry employing more authentic assessment.
- Impact on current research projects within RRDSB.
- Introduction of more variables such as gender, language structure, language spoken in the home and location of residence.
- Indigenous methodology research.



Suggested Adaptations

**Next
Steps ...
to date**