Topics
1. Literacy survey
2. Language policies
3. Interventions (including Uniskript)
4. Comparison of methods

Vernacular phonics (including Uniskript) vs. "straight-for-English" literacy, in Kikori District, Papua New Guinea.

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19-21 October 2016
Bangkok, Thailand
Topics
1. Literacy survey – very low school literacy rates
2. Language policies – MT-first is far superior
3. Interventions – Uniskript a promising literacy idea
4. Comparison of methods

Vernacular phonics (including Uniskript) vs. "straight-for-English" literacy, in Kikori District, Papua New Guinea.
Background

Provincial Language Policies

1998 – Vernacular literacy introduced

2013 – Vernacular literacy largely abandoned

2016 – Home language literacy included again in new curriculum...

Our involvement

2004 – start vernacular literature projects

2011 – start literacy survey

2013 – start Uniskript teacher training
Survey - 24 Locations

- 39 schools =
  14 primary + 19 elementary + 6 non-formal literacy
- 1490 children (< 2% speak English at home)
The survey Instrument

<table>
<thead>
<tr>
<th></th>
<th>Letters</th>
<th>Words</th>
<th>Story Text</th>
<th>-speed</th>
<th>-accuracy</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

“Literate” = at or above expected standards:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>EP</td>
<td>9</td>
</tr>
<tr>
<td>E1</td>
<td>11</td>
</tr>
<tr>
<td>E2</td>
<td>13</td>
</tr>
<tr>
<td>G3</td>
<td>15</td>
</tr>
<tr>
<td>G4</td>
<td>16</td>
</tr>
</tbody>
</table>
Surveying

We involved teachers and school board members in the survey too, so they could understand the situation for themselves.
Three Levels

**Literate** = Good readers = At or above expected standard for grade "Performing at a satisfactory and expected level"  (246 16.5%)

**Semi-literate** = Poor readers = Below expected standard for grade but better than year-1 standard or "Working towards expected level"  (310 20.8%)

**Non-literate** = Non-readers = Below year-1 standard Like beginners - have no idea how to read or "Critical and not yet working towards expected level"  (934 62.7%)
Changes in Language-of-literate Policy in Elementary Schools

2005

- Mother Tongue: 14
- English only: 7

2015

- Mother Tongue: 3
- English only: 17
- Mixed Language: 1

As Affecting Children surveyed

- Mother Tongue: 13%
- English only: 59%
- Mixed Language: 28%
Elementary-level Literacy Rates

Literacy Rates of 22 Elementary-level Schools, 878 Children

<table>
<thead>
<tr>
<th>School-name year/levels (number surveyed)</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gibidai-Non-formal 3 (11)</td>
<td>0%</td>
</tr>
<tr>
<td>Kinomere-Elem 2/3 (14)</td>
<td>0%</td>
</tr>
<tr>
<td>Karati-Elem 1/2/3 (20)</td>
<td>0%</td>
</tr>
<tr>
<td>Morovamu-Elem 1/2 (25)</td>
<td>0%</td>
</tr>
<tr>
<td>Kuri 1/2/3 (31)</td>
<td>0%</td>
</tr>
<tr>
<td>Maipenairu-Elem 3 (12)</td>
<td>0%</td>
</tr>
<tr>
<td>Wouobo-Non-formal 1/2/3 (30)</td>
<td>3%</td>
</tr>
<tr>
<td>Bavi-Elem 1/2/3 (46)</td>
<td>4%</td>
</tr>
<tr>
<td>Kikori-Elem 1/2/3 (223)</td>
<td>4%</td>
</tr>
<tr>
<td>Moka-Non-formal 1/2/3 (18)</td>
<td>6%</td>
</tr>
<tr>
<td>Ubu'o-Elem 3 (16)</td>
<td>6%</td>
</tr>
<tr>
<td>Ara'ava-Elem 1/2/3 (52)</td>
<td>10%</td>
</tr>
<tr>
<td>Komaio-Mission 2/3 (34)</td>
<td>12%</td>
</tr>
<tr>
<td>Kivaumai-Elem 1/2/3 (91)</td>
<td>13%</td>
</tr>
<tr>
<td>Kairimai-Elem 1/2/3 (56)</td>
<td>18%</td>
</tr>
<tr>
<td>Baimuru-Elem 3 (13)</td>
<td>23%</td>
</tr>
<tr>
<td>Ero-Elem 3 (30)</td>
<td>27%</td>
</tr>
<tr>
<td>Varia-Elem 2 (34)</td>
<td>33%</td>
</tr>
<tr>
<td>Kai'alavi-Uniskript 1 (18)</td>
<td>39%</td>
</tr>
<tr>
<td>Kinipo-Elem 3 (21)</td>
<td></td>
</tr>
<tr>
<td>Kapuna-Mission 1/2 (34)</td>
<td>62%</td>
</tr>
<tr>
<td>Ubu'o-Uniskript 1 (59)</td>
<td>68%</td>
</tr>
</tbody>
</table>

English-only
MT-first
mixed MT-Eng
(any language – measured 2012-2016)
Primary School Literacy Rates

Literacy Rates of 13 Primary Schools, 592 Students

School-name year/levels (number surveyed) | rate

Koravake-Prim 5/6/7/8 (81) | 6%
Karati-Prim 4/5/7/8 (27) | 7%
Ubu'o-Prim 4/6/7/8/9 (73) | 8%
Kinomere-Prim 4-8 (11) | 9%
Akoma-Prim 4/5/6/8 (88) | 10%
Kikori-Prim 4/6 (61) | 16%
Kinipo-Prim 4/6/7/8 (50) | 20%
Mapaio-Prim 4/6/7/8 (24) | 21%
Urama-Prim 6/7 (30) | 23%
Baimuru-Prim 8 (17) | 29%
Ara'ava-Prim 4/5/6/9 (53) | 32%
Maipenairu-Prim 6/7/9 (60) | 37%
Kapuna-Mission 4/5/6 (17) | 82%

(English – measured 2012-2016)
Example - Kikori Elementary School
200+ children, English-only literacy
July 2015 – only one child can read
Literacy rates of elementary-level children under various policies

(890 students in 25 schools; bubbles show numbers under each policy)

MT-first 7 times more effective than English-only!
MT and English Literacy Levels under the 3 policies

n=562 Primary School Children (English MT speakers + less detailed data excluded)

<table>
<thead>
<tr>
<th>Policy</th>
<th>MT Literacy</th>
<th>English Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>English-only</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>MT-first</td>
<td>5%</td>
<td>20%</td>
</tr>
<tr>
<td>MT-first</td>
<td>16%</td>
<td>30%</td>
</tr>
</tbody>
</table>

- English-only literacy: □ tiny numbers of literates, + large numbers non literates.
- MT-first literacy: □ moderate numbers of literates, + large numbers of semi literates.
Bridging to English

58 **GOOD MT READERS**

190 **POOR MT READERS**

314 **NON MT READERS**

n = 562 Primary Schoolers

Chi-squared test $p \ll 0.001$
Has anyone else found this in PNG?

- Department of Education + World Bank
  “Read PNG” project!
  Early Grade Reading Assessment (EGRA) surveys 2011-2013

“Evidence from ENB [East New Britain] indicates an advantage for children who read in a vernacular” [Kuanua],

“Support home language [literacy] where possible.”
East New Britain – Kuanua MT literacy gave children a head start.

A late start in literacy due to focus on English disadvantages children for their whole school career.

“support home language”

Source: PNG EGRA surveys; all median values.
Interventions -1

Uniskript
Cultural fit

Uniskript LIP symbols in various languages

Tok Pisin

Urama

Motu

Koriki

Kope
Ubu’o Schools (Kope Language)

Uniskrypt Literacy School (year 1)
Kope/Uniskrypt  Kope/Roman  English

Literacy test scores in different alphabets and languages - 2014
The difference in English scores between these two classes IS statistically significant!
(p=0.00000000000002)
So far ...

• Initial Mother Tongue literacy is *far* superior to English-only literacy

• Many prefer “straight-for-English” approach, even though it doesn’t work as well

• Uniskript is a promising tool (with properly trained teachers)
Interventions – a small comparative study

Kikori Trials (video)

Roman Letters versus Uniskript
More comparative research planned for 2017 ...

“I was in Moresby, and I caught a bus and came to Kerema, and then I got a dinghy and came to Kikori. And my mother bought a chicken there, and then we went up to Waira village and we are staying there.”

“Mi stap lon Mosbi na mi kisim piembi na mi kam lon Kerema na mi kisim dingi na mi kam lon Kikori na mama bilon mi baim wanpela kakaruk na mipela i goantap lon Waira na mipela i stap.”
Questions

1. Why did schools abandon MT literacy if it worked better?

2. Some teachers say: “Our school has children from all sorts of language backgrounds, so we decided that English should be the language of the community and school.” Does that work?

3. Some parents and teachers say: “Tok Pisin is spreading. If we teach Tok Pisin literacy in school, won’t that cause English to fade away?”

4. Some parents say: “If children learn too many languages, will that spoil their ability to learn at school.” Is this true?

5. How long does it take to develop a Uniskript alphabet?

6. Doesn’t Uniskript add an extra step that will delay transition to the national language?

7. Does Uniskript have government approval?
50. 请跟我说 *p*，这是由双唇发出的送气音：

36. 请跟我说 *ao*：

- 声调图标
- 韵母图标
- 声母图标
- 止鼻音图标

Mandarin

- Baba
- Pao
- Mama
- Tianfu
The Kikori data comparing the different literacy methods.
ICONO-FEATURAL ALPHABETS (1)

King Sejong's Hangul for Korean (1446)

한글

- tongue back
- tongue tip
- lips
- glottis