Phonological knowledge and literacy learning by Indigenous students

John Munro
Basis for presentation

- East Gippsland (EG) Schools Cluster was keen to improve quality of literacy learning and teaching.

- We wanted to know what knowledge relevant to literacy the students were bringing to school.

- High proportion of the students came from a Koorie background.
Basis for presentation

- How do we need to modify our teaching to assist students to learn written literacy more effectively?

- We wanted to ensure that our teaching captured student interest and engagement by letting them see that they could be optimally successful in their literacy learning.
Knowing of the sound patterns in English is necessary for learning to be literate

A key prerequisite for effective literacy learning is a knowledge of the sound patterns in English.

This includes being able to:
- recognize and use sound patterns within words,
- recognize shared sound patterns between words,
- use the sound patterns in some words to work out how to say other words.

This sound knowledge is called phonological and phonemic knowledge and skills. Children usually begin to learn it before they begin formal education.
Knowing the sound patterns and learning/communication more generally

- Allows individuals to say words accurately, recall words easily during communication
- Work out how to say new words and what they might mean
- Use language in social contexts, understand purposes for communicating
- Retain what was heard in short term memory
What we do to read new words?

- Read aloud these ‘ba’ words.

  bardocucullus  bacciferous  baragouin  batrachophobia

  barbigerous  batrachian  baft  baryphonic

Comment on the knowledge and strategies you use to read these words:
What do we learn new vocabulary?

The Nile was able to **sustain** life in Egypt. The new word here is “sustain”. The person needs to work out how to say it. This is the ‘door’ to its meaning.
The Nile was able to sustain life in Egypt.

How new word is learnt

Make analogy with known words that have a similar pattern: _main, pain, obtain_

Look at how ‘sus’ and ‘tain’ are said

Learned “sustain”

Joined Here

Short Term Memory
(Thinking Space)

Long Term Memory
(Existing Knowledge)

Reader
Our discussion today

My focus today examines the acquisition of this knowledge by Koorie primary students in grades 3-6.

It asks the question: To what extent have these students had the opportunity to learn this knowledge as a foundation for building literacy knowledge.

To answer this question, the study examines the ability to these students to complete various phonological and phonemic tasks.
What we mean

Some key concepts that describe aspects of this early development.

<table>
<thead>
<tr>
<th>what we know about the sound patterns in our language.</th>
<th>phonological knowledge</th>
<th>what we know about individual speech sounds or phonemes.</th>
<th>phonemic knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>our awareness of individual sounds</td>
<td>phonemic awareness</td>
<td>what we know about saying single sounds with other sounds</td>
<td>phonetic knowledge</td>
</tr>
<tr>
<td>letter-sound patterns</td>
<td>phonic knowledge</td>
<td>patterns of letters used to write words</td>
<td>orthographic knowledge</td>
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</tbody>
</table>
How phonological, phonemic knowledge develops

**Implicit awareness of sound patterns in words**
- recognize, say rhyming words
- recognize, say rhyming words in prose
- recognise words that alliterate

**Segment words into sound groups, blend sound groups**
- segment words into onset and rime
- identify the first sound /last sound
- blend onset and rime

**Segment words into sounds, blend sounds**
- Segment words into individual sounds (phonemes)
- Tap for / count each sound
- Blend sounds
### How phonological, phonemic knowledge develops

<table>
<thead>
<tr>
<th>Manipulating sounds within words</th>
<th>Delete sound from a word Substitute one sound for another</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manipulating sounds in 2-, 3-syllable words</td>
<td>Synthesize syllables and destress vowel Identify the schwa and the sounds around it</td>
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</tbody>
</table>
# Phonological knowledge profile

<table>
<thead>
<tr>
<th></th>
<th>Sounds in word</th>
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<tbody>
<tr>
<td></td>
<td>3  4  5  6</td>
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</table>

1. **Implicit awareness of sound patterns in words**
   - 1.1 Recognize rhyming words
   - 1.2 Produce rhyming words
   - 1.3 Recognize rhyming words in prose
   - 1.4 Produce rhyming words in prose
   - 1.5 Recognise words that alliterate

2. **Segment words into sounds**
   - 2.1 Segment words into onset and rime
   - 2.2 Identify the first sound
   - 2.3 Identify the last sound
Phonological knowledge profile (cont.)

<table>
<thead>
<tr>
<th>2.5 Segment words into individual sounds</th>
<th>Sounds in word</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5.1 Say each sound in order</td>
<td>3 4 5 6</td>
</tr>
<tr>
<td>2.5.2 Tap for each sound</td>
<td></td>
</tr>
<tr>
<td>2.5.3 Count the sounds</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3. <strong>Sound blending</strong></th>
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</thead>
<tbody>
<tr>
<td>3.1 Onset-rime blending to make a word</td>
</tr>
<tr>
<td>3.2 Blend a sequence of sounds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. <strong>Manipulating sounds within words</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Delete sound from a word</td>
</tr>
<tr>
<td>4.2 Substitute one sound for another</td>
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</tbody>
</table>
## 5. Phonemic recoding: Bridging to written words

<table>
<thead>
<tr>
<th></th>
<th>letters in word</th>
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<tbody>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>5.1 Say individual letters (proportion correct)</td>
<td>4</td>
</tr>
<tr>
<td>5.2 Say letter clusters</td>
<td></td>
</tr>
<tr>
<td>5.3 Say groups of letter clusters</td>
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</tbody>
</table>
Typical errors made

Main types of errors:

- Separating sounds, for example, in word onsets
- Substituting sounds, replace long vowel by short vowel
- Adding sounds
Nature of the problem

Each task involves two aspects:

- Retaining the individual sound values
- Doing the relevant action/s.

Some of the Koorie students who have literacy difficulties also have difficulty manipulating and retaining the individual sounds.
Teaching activities

Recognizing and producing rhyming words  Students detect rhymes and alliteration and say rhymes and alliteration.

Recognizing and expressing simple rhyming units

1. **Imitate a rhyming pattern.** Repeat saying a two-sound pattern such as "in, in, in, in" and then "pin, tin" or "cap, tap". Gradually extend to repeating patterns of three and four words and for sequences of longer words.

2. **Recognizing a rhyming pattern.** Show pictures of three familiar objects, two of whose names share a rime. The child picks the pictures that rhyme. Repeat for sets of four pictures at once, and for longer words. Play card games such as Snap or Memory in which children match pictures of names that rhyme.
Teaching activities

Recognizing and producing rhyming words  Students detect rhymes and alliteration and say rhymes and alliteration.

Recognizing and expressing simple rhyming units

Produce rhyming words

- Show pictures of items that rhyme, for example, pictures of a cub, a sub and a tub. Children say other words that rhyme with these.

- Play games in which children have to take turns to think of rhyming words, for example, for “slip, clip...”

- Brain storm words that have a particular rime. Children work in small groups to see how many words they can remember that rhyme, for example, have the *ake* pattern.
Teaching activities

*Produce rhyming words in prose*  The child says rhyming words in prose, for example, *Tom rolled off his bed and hurt his _____.*

- Read a story with a rhyming pattern such as a Dr Seuss or a Jelly Bean book. Children predict the rhyming word/s that fit the context of the sentence.

- The children make up rhyming sentences, for example, *I am called Jack and my hair is _______ and make up their own verse, for example, nursery rhymes and television jingles.*
Teaching activities

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Teaching activities

**Recognizing and producing words that alliterate.**

Imitate an alliterative pattern. Continue an alliterative pattern among words. Begin with single consonant sound patterns.

Recognise an alliterative pattern. Show pictures of three familiar objects, two of whose names alliterate, for example, a cat, a cot and a pig. The child selects the pictures that sound the same.

Say an alliterative pattern in a story, eg., *The green gran grabbed the grapes, I saw a snake slithering silently.*

Produce alliterative patterns in songs and verse, for example, *Sam is skipping with Suzie. Hazel is hopping past Henry.*
Teaching activities

Segmenting words into sounds

**Segmenting words into onset and rime**

1. *Finish the word.* The children hear a meaningful sentence and the onset or rime of a word and suggest the complete word, for example, *The dog chased after the c_____ (cat, car, cart, etc).* How did you know the word to say?

2. *Pick the odd one out.* Show sets of pictures of familiar objects where most begin with the same onset, for example, spoon, spin, sand and speck or that end with the same rime for example, sink, think, hand and link. Which one sounds different?

3. *Recognizing the same onset or rime.* Play card games such as Snap or Memory in which children match pictures of names that have either the same onset or rime, for example
Teaching activities

Segmenting words into sounds

**Segmenting words into onset and rime**

4. *Segment words into these parts.* Show pictures of familiar items, such as a bed, a cat, a tram, a star. The child names each item. Say *"Listen to how I say bed. B-ed."* The child repeats the segmentation and applies it to other words.

5. *Say the shared sound pattern.* Show the children sets of 3 and then 4 pictures of three familiar objects where all but one begin with the same onset, for example, spoon, spin, hand and speck or that end with the same rime for example, sink, think, hand and link. Ask the children to say the shared sound pattern.

6. *Saying words that have the same onset or rime.* Develop activities in which the children take turns to think of words that begin with the same onset or that end with the same rime.
The broader EG literacy program

Teaching phonological and phonemic knowledge are one part of our literacy programme in EG.

Other aspects include

- Learning how to build word meanings
- Learning to decide the dispositions and topics of texts
- Learn to comprehend sentences, paragraphs, etc.
- Building relationships through literacy, making literacy work for you.
In closing

Some students are restricted in their literacy outcomes because they have not learnt how to be analytic about aspects of spoken English.

This restricts their capacity to learn English literacy and to think in ‘literacy like’ ways.

The teaching frequently assumes this knowledge and skill is in place.

We need to include explicit phonological and phonemic activities in our literacy teaching.

This needs to be implemented in a developmental way always building on and valuing what the students already know.