

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Young Learners: Understanding Children's Early Literacy Reasoning using Two-Tier Tasks**

Esther Man-Ching Chan

Melbourne Graduate School of Education  
The University of Melbourne, Australia

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Chief Investigators**  
Associate Professor Margaret Brown (Principal Investigator), Associate Professor Esther Care, Professor Bridie Raban, Professor Field Rickards, Mr Terry O'Connell (Australian Scholarships Group)

**Research team (past and present)**  
Ms Renata Aliani (Project manager), Associate Professor Brown (Team leader), Ms Emelie Barringer, Dr Anna Bortoli, Mr Robert Brown, Dr Linda Byrnes, Associate Professor Care, Ms Esther Chan, Dr Amelia Church, Ms Jan Deans, Ms Michelle Hsien, Ms Lucy Jackson, Dr Anne-Marie Morrissey (now at Deakin University), Dr Andrea Nolan (now at Victoria University), Dr Louise Paatsch (now at Deakin University), Mr Derek Patton, Professor Raban, Dr Maria Remine, Dr Janet Scull, Ms Lena Tan, Ms Jessica Taylor, and Dr Linda Watson (Birmingham University, UK)

**Funding Support**  
Australian Scholarships Group (ASG); Australian Research Council (ARC): Linkage Projects funding scheme (Project number LP0883437); Melbourne Graduate School of Education, The University of Melbourne

Australian Government  
Australian Research Council

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Study aim**

- Explore the use of two-tier tasks to assess early literacy reasoning

3

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Two-tier task format**

- First tier
  - Closed-ended question e.g. multiple choice
- Second tier
  - Follow-up open-ended question

4

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Word structure**

bbb	a	fx
wn	boat	csk
you	salient	h

5

Young Learners' Project

ASG Early Intervention Research Program Australian Scholarships Group

**Examples of early literacy assessment tasks**

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z		

6

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Examples of early literacy assessment tasks

I	was	it
the	my	then
and	went	he
to	we	had
a	on	...

*From the Oxford Wordlist (Oxford University Press, 2008)*

7

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Early literacy processes

*The path children take to comprehend the characteristics, value, and function of written language, from the time it becomes an object of their attention (and as such, of their knowledge).*

Ferreiro and Teberosky, 1982, p. 1

8

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Early Literacy Knowledge and Skills (ELKS) instrument (Barringer, Brown, Chan, & Care, 2009)

1. Silent Reading Behaviour
- 2a. Writing
3. Spacing Between Words
4. Differentiation Between Symbols
5. Word Structure
6. Reading With Pictures
7. Word Identification
8. Word Reading
9. Swapping Terms
10. Letter Identification
- 2b. Writing Re-reading

9

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Research questions

1. What do the two-tier tasks reveal about children's early literacy reasoning?
2. What issues need to be considered for these tasks to be useful for teachers?

10

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Data collection

- 102 children (males = 49, females = 53)
- Middle of their first year of primary school
- 5 years 3 months to 6 years 7 months
- 42 primary schools in metropolitan Melbourne, Australia
- Individually administered
- 20 mins per child on average, ranging from 15 to 45 mins

11

Young Learners' Project  
 ASG Early Intervention Research Program Australian Scholarships Group

### Data analysis

- Thematic analysis

12

ID	Student Name	Word choice	WordStruc_explanation_a	WordStruc_category_a	WordStruc_explanation_b	WordStruc_category_b
03011	David	2 nonword	[It is not a word because] only one letter	letter quantity	1 word [It is a word because] three letters	7 letter quantity
03012	Cedric	1 word	[It is a word because] it's in the golden word	matches with known word (exact spelling)	2 nonword [It is not a word because] It has lots of the same letters	8 letter variation
03013	Carmel	2 nonword	[It is not a word because] it's A	presence of particular letters	1 word [It is a word because] BBB	6 presence of particular letters
03015	Mary	2 nonword	[It is not a word because] just a B by itself	letter quantity	2 nonword [It is not a word because] just 3 B	8 letter variation
03016	Ashley	2 nonword	[It is not a word because] these are letters	letter quantity	1 word [It is not a word because] BBB	6 presence of particular letters
03020	Meliss	1 word	[It is a word because] a	matches with known word (exact spelling)	2 nonword [It is not a word because] BBB	6 presence of particular letters

Young Learners' Project  
ASG Early Intervention Research Program

### Responses

- Presence of letters *"It's got letters."*
- Letter variation *"That has all different letters in it."*
- Letter quantity *"It has lots of letters together."*
- Mixture of consonants and vowels *"[cskp] is not a word because it doesn't have any vowels."*
- Similarity or resemblance with known word *"At kinder, we have word cards with the word fox. [fxt] looks like fox, but it is not fox because X needs to be over there where the T is."*

14

Young Learners' Project  
ASG Early Intervention Research Program

### Responses (cont'd)

- Word recognition *"'You', my golden word. It's got Y-O-U, 'you'."*
  - For the card *salient*: *"/Sa/-lient/ is not a word; it could be a mixed up satellite."*
- Whether the word could be pronounced, regardless of whether the word was known or not *"'Salient', I don't know what it means."*
- Dual role of some letters (e.g. a) *"Sometimes a is a word. You can leave it and keep it [in the Nonword category]. It's a word and a letter."*

15

Young Learners' Project  
ASG Early Intervention Research Program

### Responses (cont'd)

- Unclear explanations
  - *"This looks like/doesn't look like a word."*
  - *"This makes sense/doesn't make sense."*
  - *"Because I can tell."*
  - *"Because it has W-N."*

16

Young Learners' Project  
ASG Early Intervention Research Program

- Criterion to compare the responses
 

Score	1st tier	2nd tier
0	✗	✗
1	✓	✗
2	✓	✓

  - Correctness?
  - Sophistication?
  - Language skills?

~~[Boat is a word because] it looks like a word.~~

~~[Boat is not a word because] I thought this says boat but it's got an A in it. It should be spelled as 'bot'.~~

17

Young Learners' Project  
ASG Early Intervention Research Program

- From whose perspective?
  - Task designing  
*What do we—the task designers—want the task to assess?*
  - Thematic analysis  
*What do the children's responses say about their understanding of the tasks?*

18

thebeareatshoney

the bear eats honey

Young Learners' Project

ASG Early Intervention Research Program

### Spacing Between Words

Item 1

thebeareatshoney ✗

the bear eats honey ✓

Item 2

the pig rolls in mud ✓

thepigrolls in mud ✗

20

Young Learners' Project

ASG Early Intervention Research Program

### Purposes of spacing

- Aids reading "[The sentence without spacing] is joined up together without any spaces. I can't read it properly. [The sentence with spacing,] I can read."
- Speed of speech "[The sentence without spacing] wasn't slow."
- Social convention "The words [in the sentence without spacing] are all stuck together, like the name of a website."

21

Young Learners' Project

ASG Early Intervention Research Program

### Which sentence did I read?

Item 1

thebeareatshoney ✗

the pig rolls in mud ✓

the bear eats honey

thepigrolls in mud

It looks trickier.

22

Young Learners' Project

ASG Early Intervention Research Program

### Understanding of reading process

- Eye movement "I saw you looking at the sentence."
- Text-speech correspondence "This says (word-by-word pointing) 'the bear eats honey'."
- Internal reading processes "I sounded this out in my head and thought."
- Text can be broken down into smaller units "This starts with 'the.' / "This says 'H'."
- Reading sequence "Because the words usually start at the top."

23

Young Learners' Project

ASG Early Intervention Research Program

### Discussion

- Constructivist understanding of early literacy as meaning making
  - "[a] is not a real word. It's sort of a word and it isn't."
- Context dependency of the rules of written language
  - Txt msg; gr8t; b4
- Two-tier tasks may allow better insights into children's reasoning

24

UNIVERSITY OF MELBOURNE  
MELBOURNE GRADUATE SCHOOL OF EDUCATION

Young Learners' Project

ASG Early Intervention Research Program

Australian Scholarships Group

### Issues to consider

- ❑ Need to understand the sources of variations when using more complex and open-ended tasks
- ❑ Tension between the need for standardizing tasks and interpretation, and quantifying behaviors, and the need for contextualizing assessment responses
- ❑ Need better ways to analyze data more efficiently, while preserving meaning

25

UNIVERSITY OF MELBOURNE  
MELBOURNE GRADUATE SCHOOL OF EDUCATION

Young Learners' Project

ASG Early Intervention Research Program

Australian Scholarships Group

### Conclusions

- ❑ An attempt to provide an alternative to existing early literacy assessments
- ❑ Complexity in children's thinking
- ❑ Context dependency of the rules of written language
- ❑ Methodological issues to consider

26

UNIVERSITY OF MELBOURNE  
MELBOURNE GRADUATE SCHOOL OF EDUCATION

Young Learners' Project

ASG Early Intervention Research Program

Australian Scholarships Group

mcechan@gmail.com

Esther Man-Ching Chan

Melbourne Graduate School of Education  
The University of Melbourne, Australia

UNIVERSITY OF MELBOURNE  
MELBOURNE GRADUATE SCHOOL OF EDUCATION

Young Learners' Project

ASG Early Intervention Research Program

Australian Scholarships Group

### References

Barringer, E., Brown, P. M., Chan, E., & Care, E. (2009). *Early Literacy Knowledge and Skills Scale (ELKS)*. Parkville, Victoria, Australia: The University of Melbourne.

Ferreiro, E., & Teberosky, A. (1982). *Literacy before schooling* (K. G. Castro Trans.). Exeter, NH: Heinemann Educational Books. (Original work published 1979)

Oxford University Press. (2008). *Oxford wordlist*. South Melbourne, Victoria, Australia: Author. Retrieved from [http://www.oup.com.au/downloads/Education/Primary/Successful\\_Teacher/Oxford\\_Wordlist.pdf](http://www.oup.com.au/downloads/Education/Primary/Successful_Teacher/Oxford_Wordlist.pdf)

28