School of Social Sciences
University of Dundee

Early reading in languages other than English:
similarities, differences and transfer

Lynne Duncan

ISSR, Psychology, University of Dundee, 16th March, 2018

Cross-linguistic study of early reading acquisition

Variation in:

education

→ age of formal reading instruction
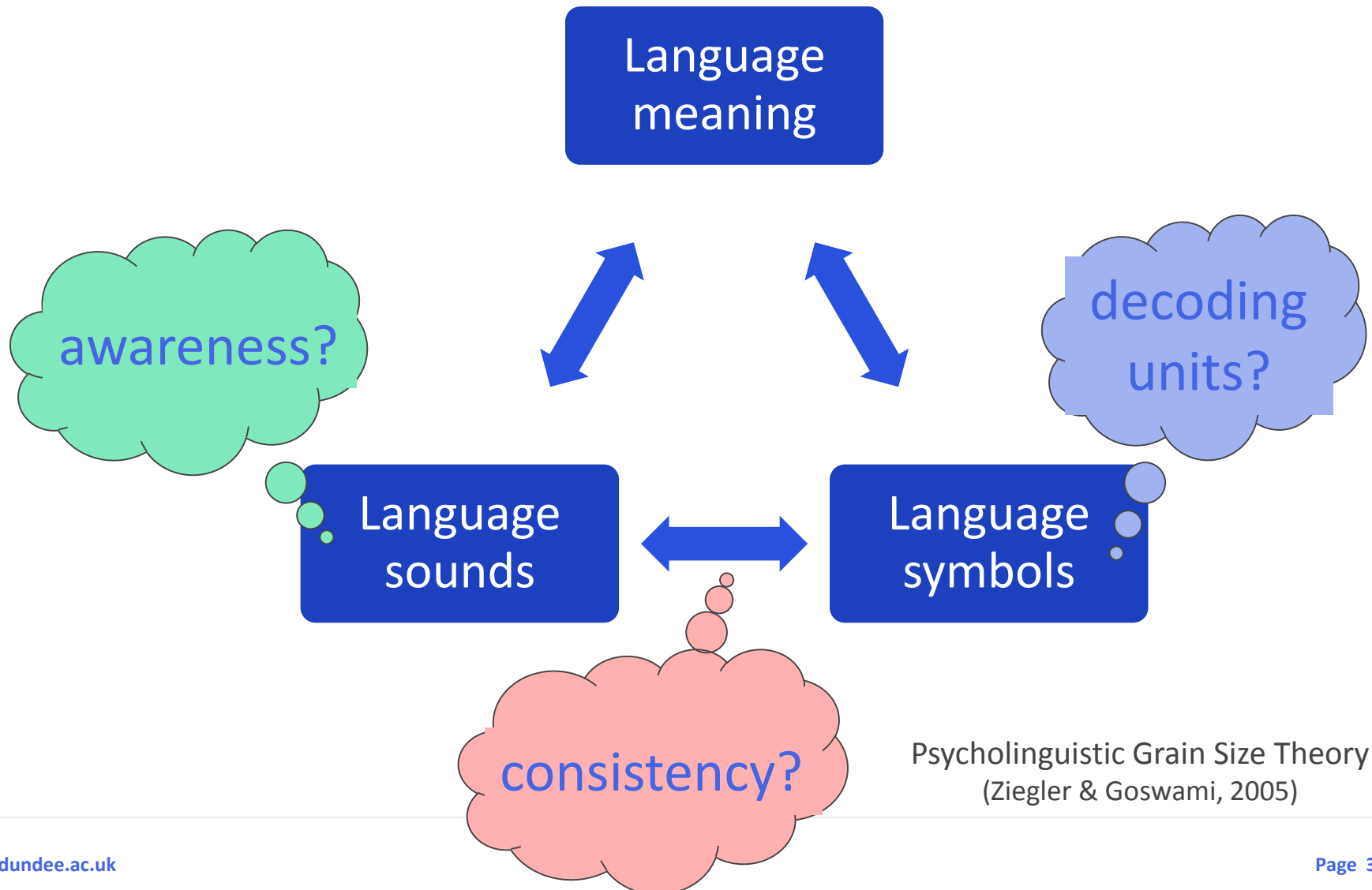
→ teaching methods

spoken language

→ syllable complexity

→ speech rhythm

written language

→ symbols

→ decoding depth

Understanding early reading

Language meaning

awareness?

decoding units?

Language sounds

Language symbols

consistency?

Psycholinguistic Grain Size Theory
(Ziegler & Goswami, 2005)

Spoken language differences

Language	Stress	Vowel Reduced	Syllable Structure		CV %
			Onset	Coda	
English	Free	Yes	CCC	CCCC	34
Spanish	Free	No	CC	CC	56
French	Fixed	No	CCC	CC	56

Lexical stress

English
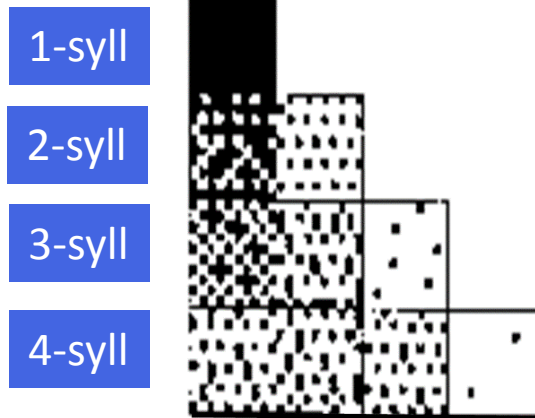
Spanish
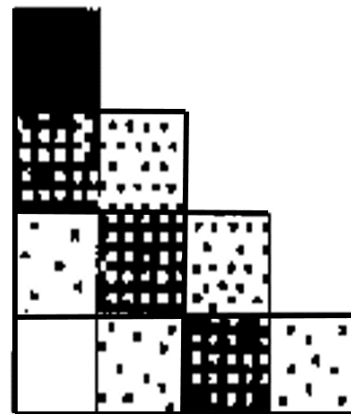
French
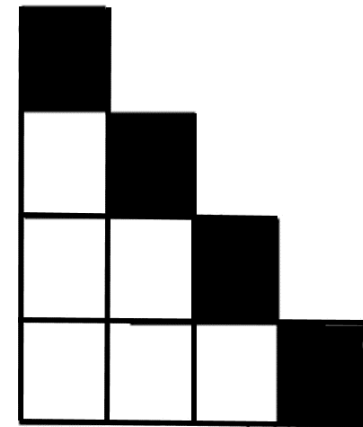
1-syll

2-syll

3-syll

4-syll

Adapted from Delattre (1965)

Spoken language differences

Language	Stress	Vowel Reduced	Syllable Structure		CV %
			Onset	Coda	
English	Free	Yes	CCC	CCCC	34
Spanish	Free	No	CC	CC	56
French	Fixed	No	CCC	CC	56

JETZT

现在 AHORA अभी

τώρα NOW 지금

ADESSO 今 Теперь AGORA

MAINTENANT الآن

Spelling-to-sound translation

1-1 correspondences: dog, sun

Many-1 correspondences: beach, cough

Consistency?   cough, rough, bough
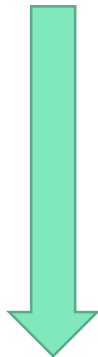
Orthographic depth

Orthographic Depth
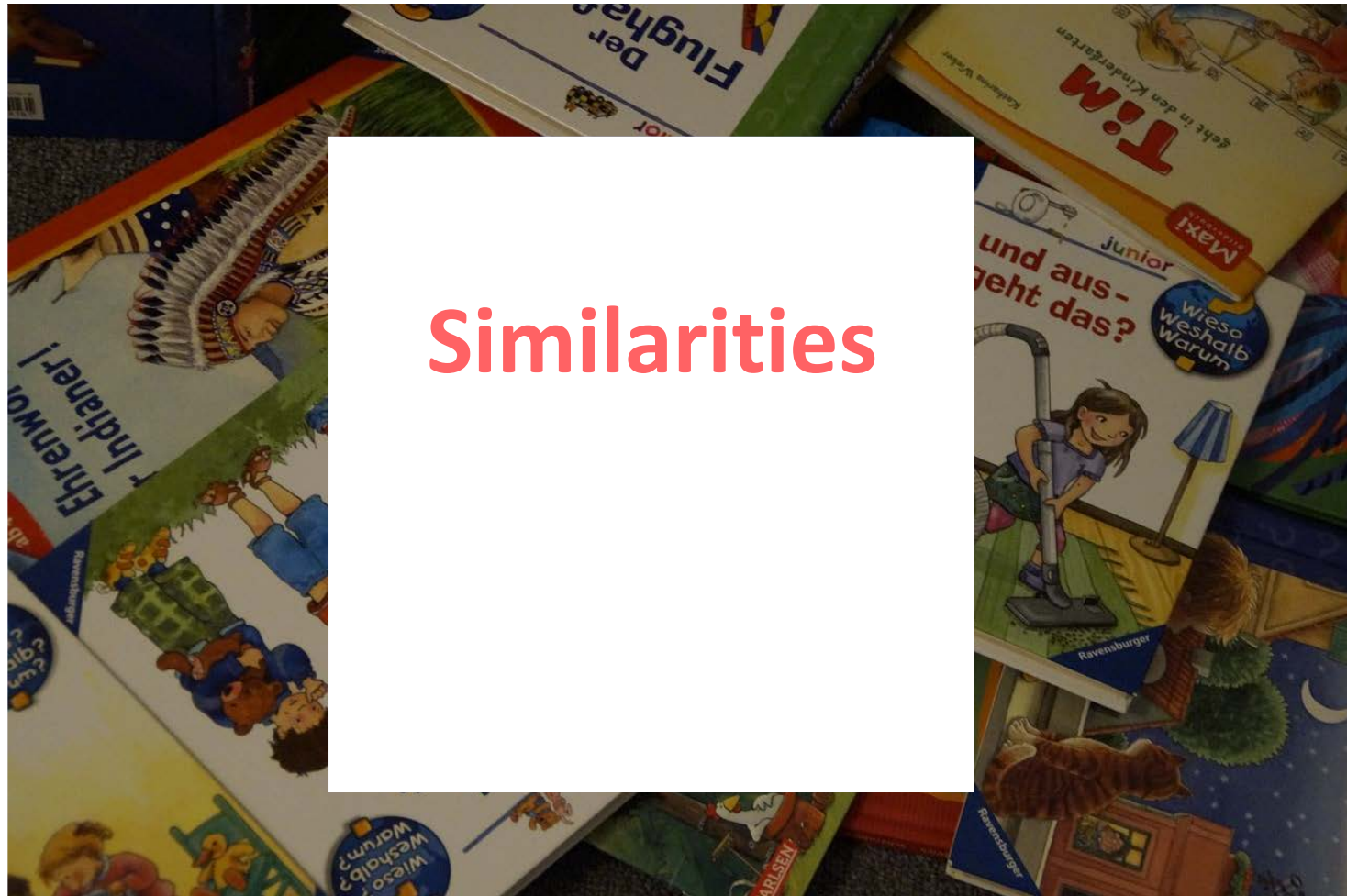
	Shallow → Deep				
Simple	Finnish	Spanish Greek	Portuguese French		
Complex		Norwegian Swedish Icelandic		Danish	English

Syllables (Simple → Complex)

Learning to read in different languages

Similarities

Participants

	Group size	Age
English	**55**	**5;4**
French	**20**	**6;6**
Greek	**50**	**6;3**
Icelandic	**33**	**6;2**
Portuguese	**22**	**6;3**
Spanish	**62**	**6;3**

Phoneme awareness
Which sound is the same in….?

Phonics instruction?

Chart legend:
- English
- Icelandic
- Portuguese
- Greek
- Spanish
- French

X-axis: Start — End

First year of reading instruction

Duncan et al (2013)
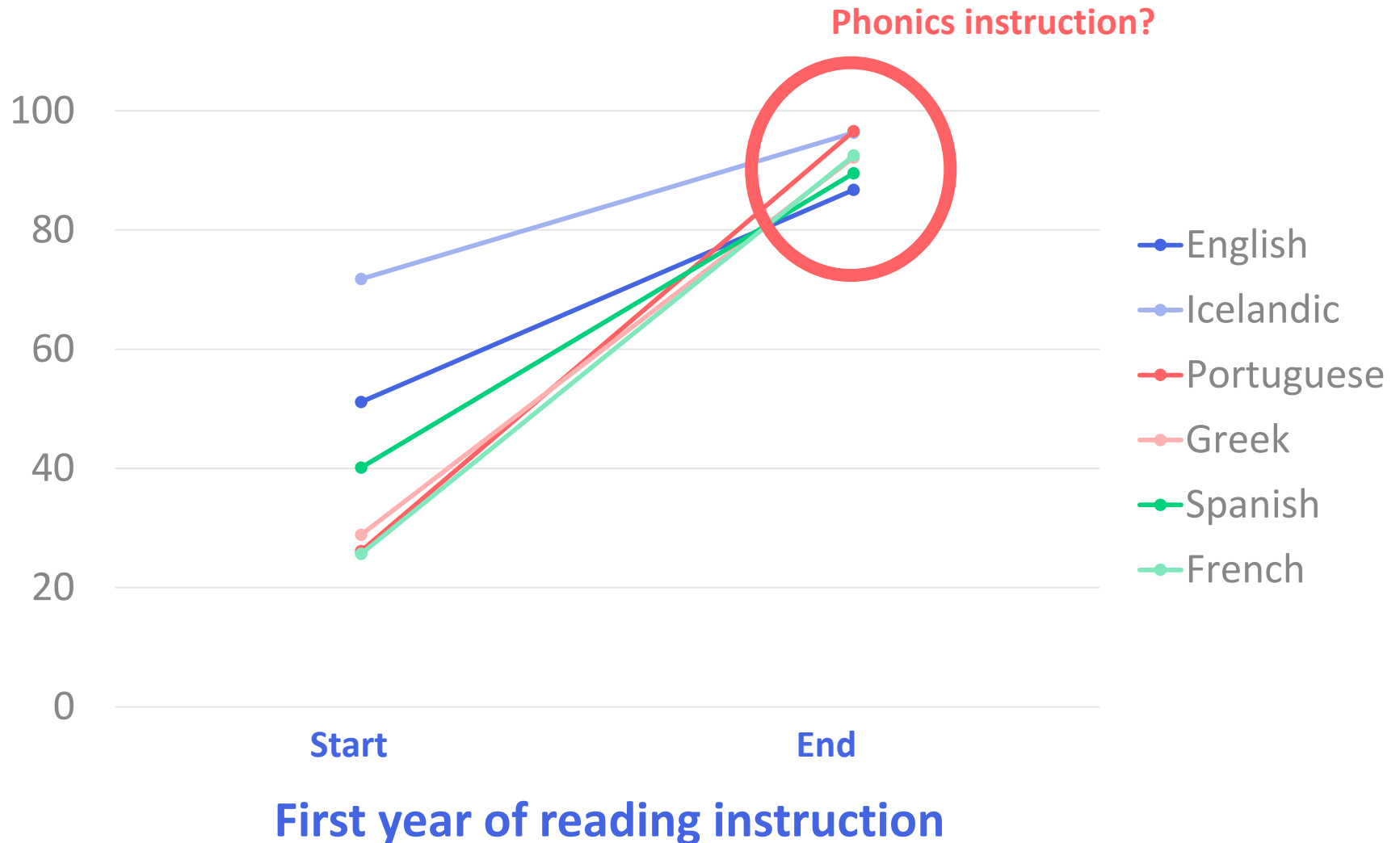
Effect of reading instruction?

Belgium – all children native French speakers

→ **Whole-word** instruction in French

  → a look-and-say approach to reading

  → practice of whole-word identification using techniques such as flash cards

→ **Phonics** instruction in French

  → letter-sound knowledge

  → phoneme awareness

  → phonics games to practice using associations between letters and sounds to decode words
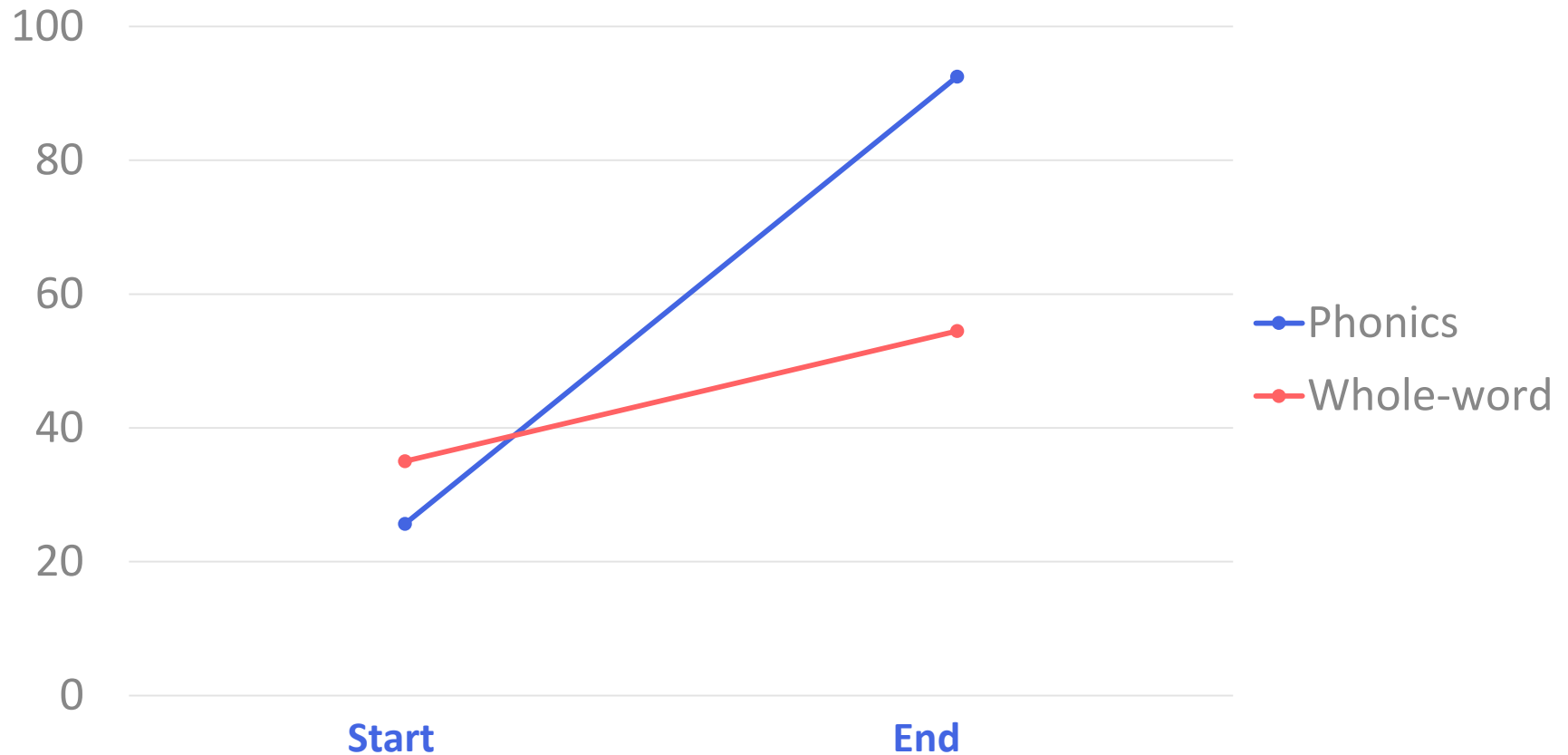
Duncan et al (2013)

Participants

Method	Group size	Age	Non-verbal abilty
Whole-word	15	6;6	25
Phonics	20	6;6	25

Phoneme awareness

Which sound is the same in....?

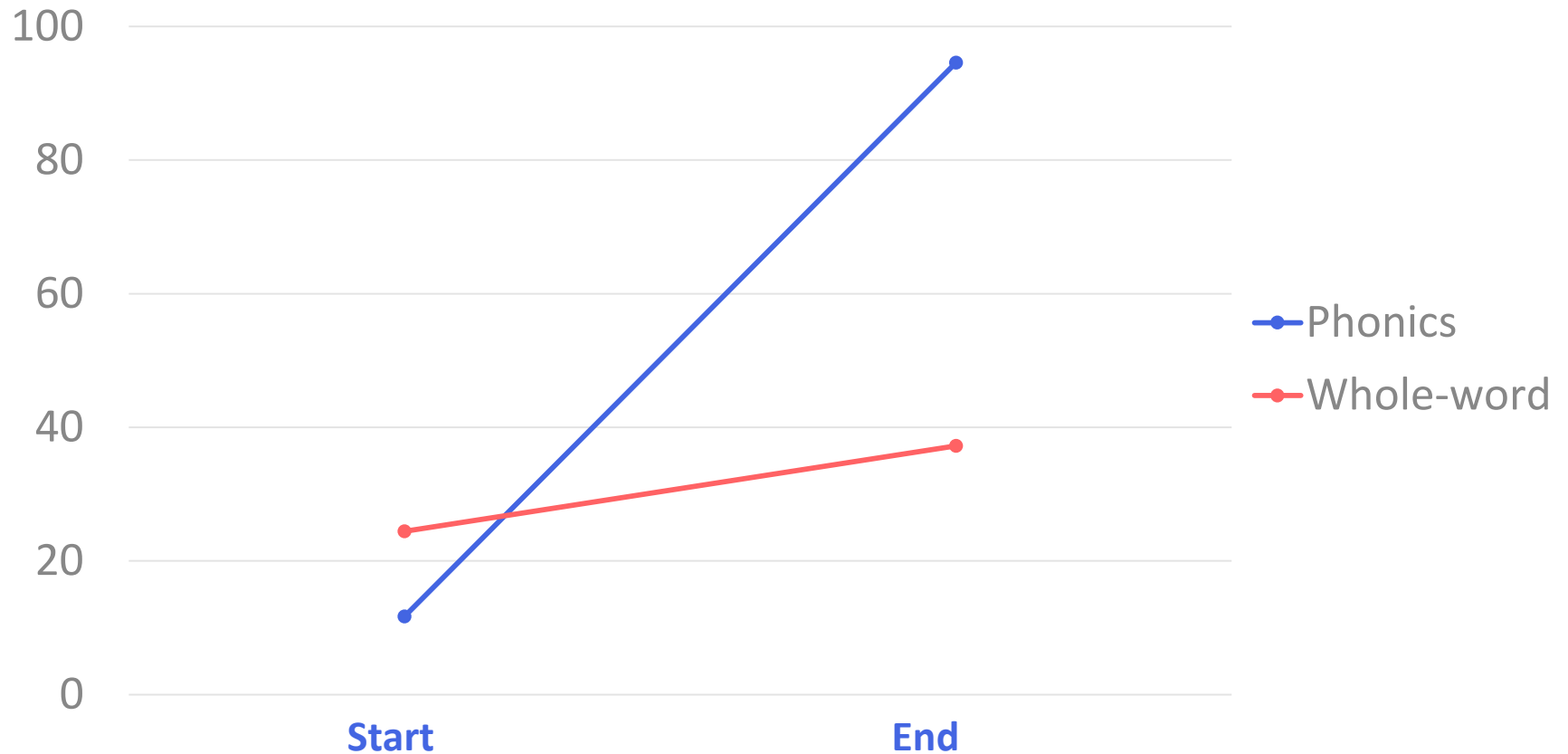**First year of reading instruction**
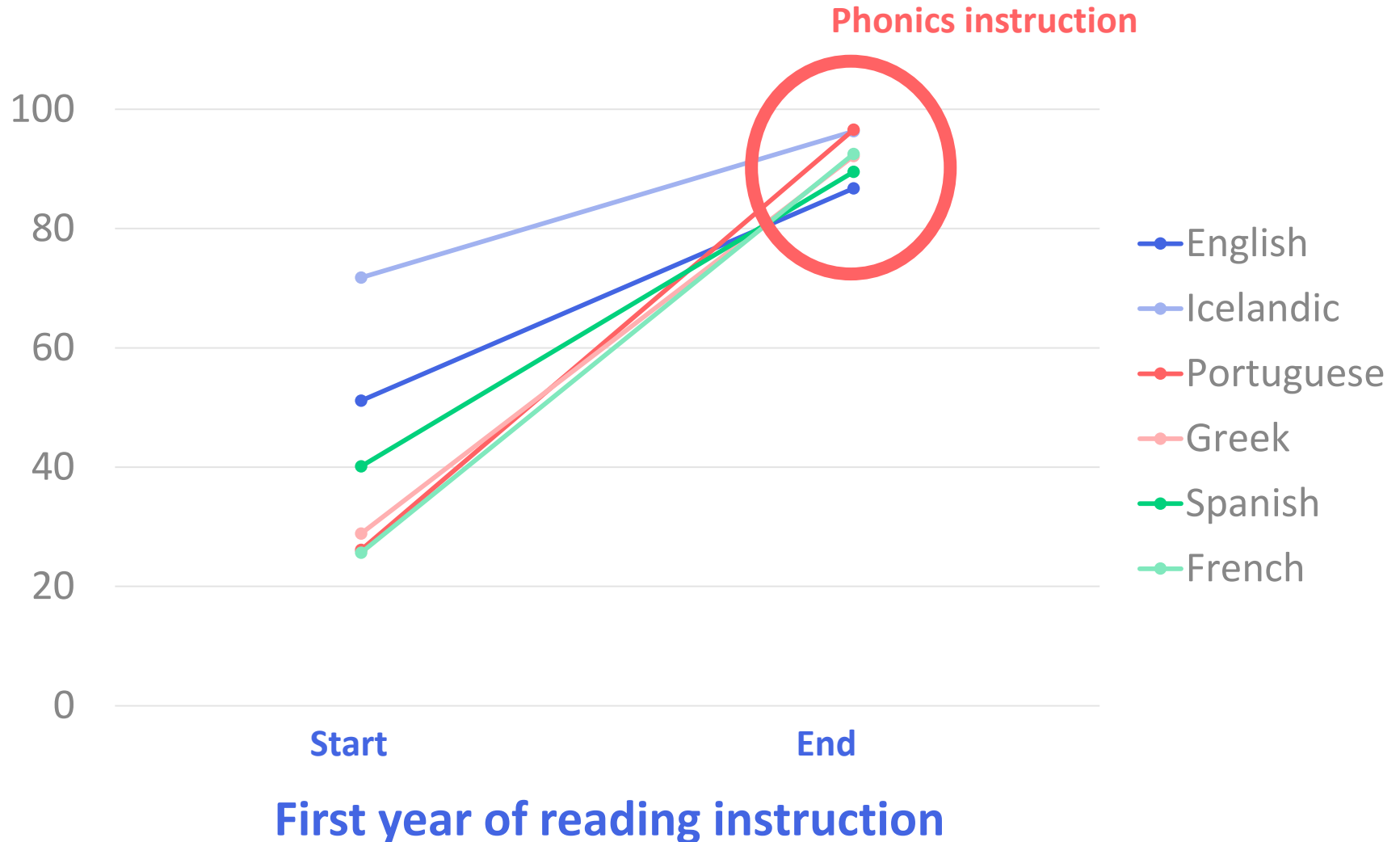
Duncan et al (2013)

Phoneme awareness
Which sound is the same in….?

Phonics instruction

100

80

60

40

20

0

Start   **End**

First year of reading instruction

- English
- Icelandic
- Portuguese
- Greek
- Spanish
- French

Duncan et al (2013)

Simple decoding

100

80

60

40

20

0

Phonics

Whole-word

Start   **End**

First year of reading instruction
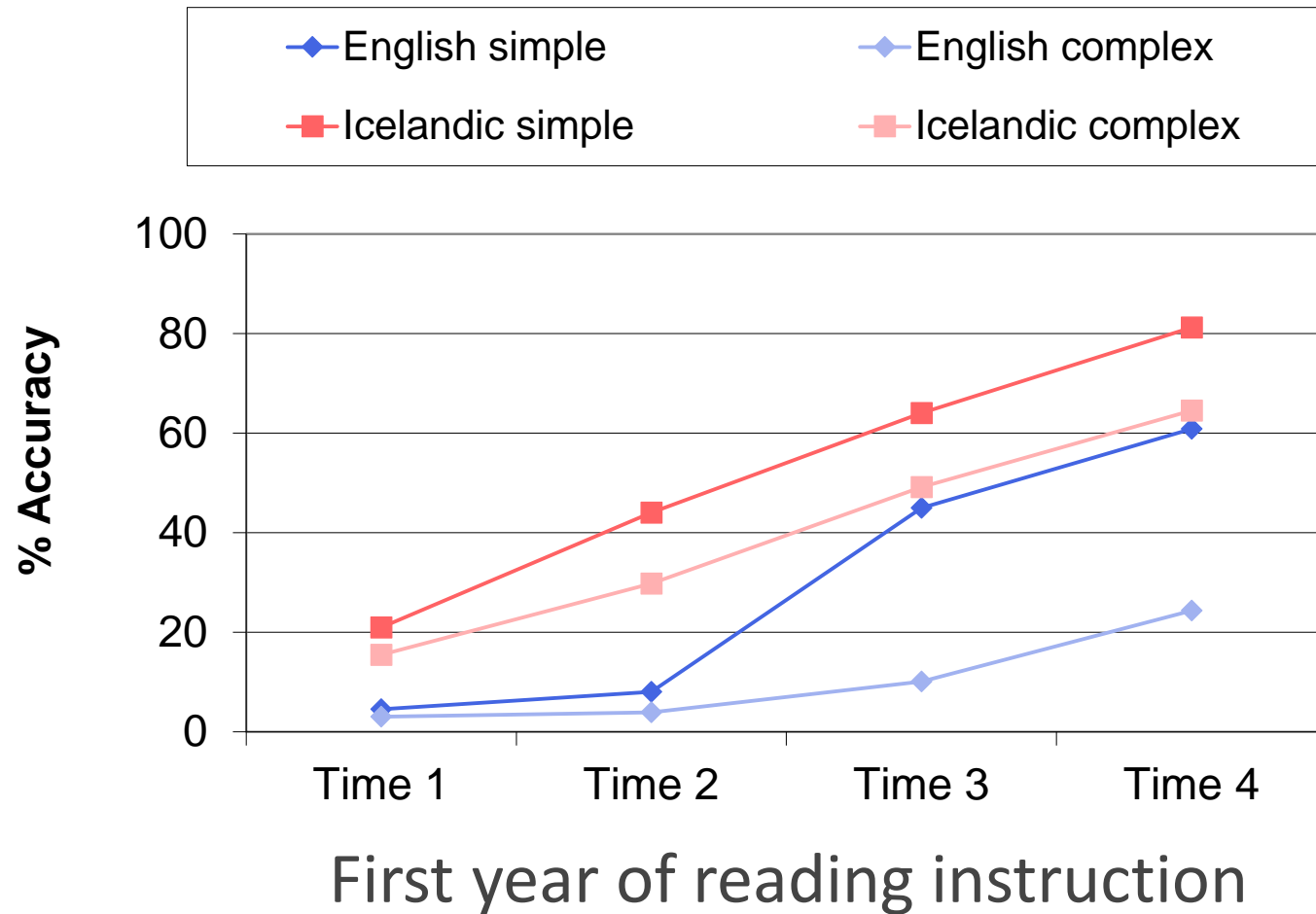
Duncan et al (2013)

Learning to read in different languages

Differences

Cross-language comparison of English and Icelandic
simple (e.g. run) vs. complex words (e.g. put)

Complexity effect for word reading
at end of first year of instruction

Language	% Difference between simple & complex words
Finnish	1.76
Greek	6.04
Spanish	4.96
French	13.96
Portuguese	12.05
Icelandic	16.67
English	36.49

Seymour & Duncan (2003)

Orthographic depth

Orthographic Depth

Shallow → **Deep**

Simple

Syllables

↓
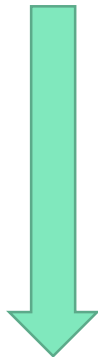
Complex

	Finnish	Spanish Greek	Portuguese French		
		Norwegian Swedish Icelandic		Danish	English

Understanding early reading
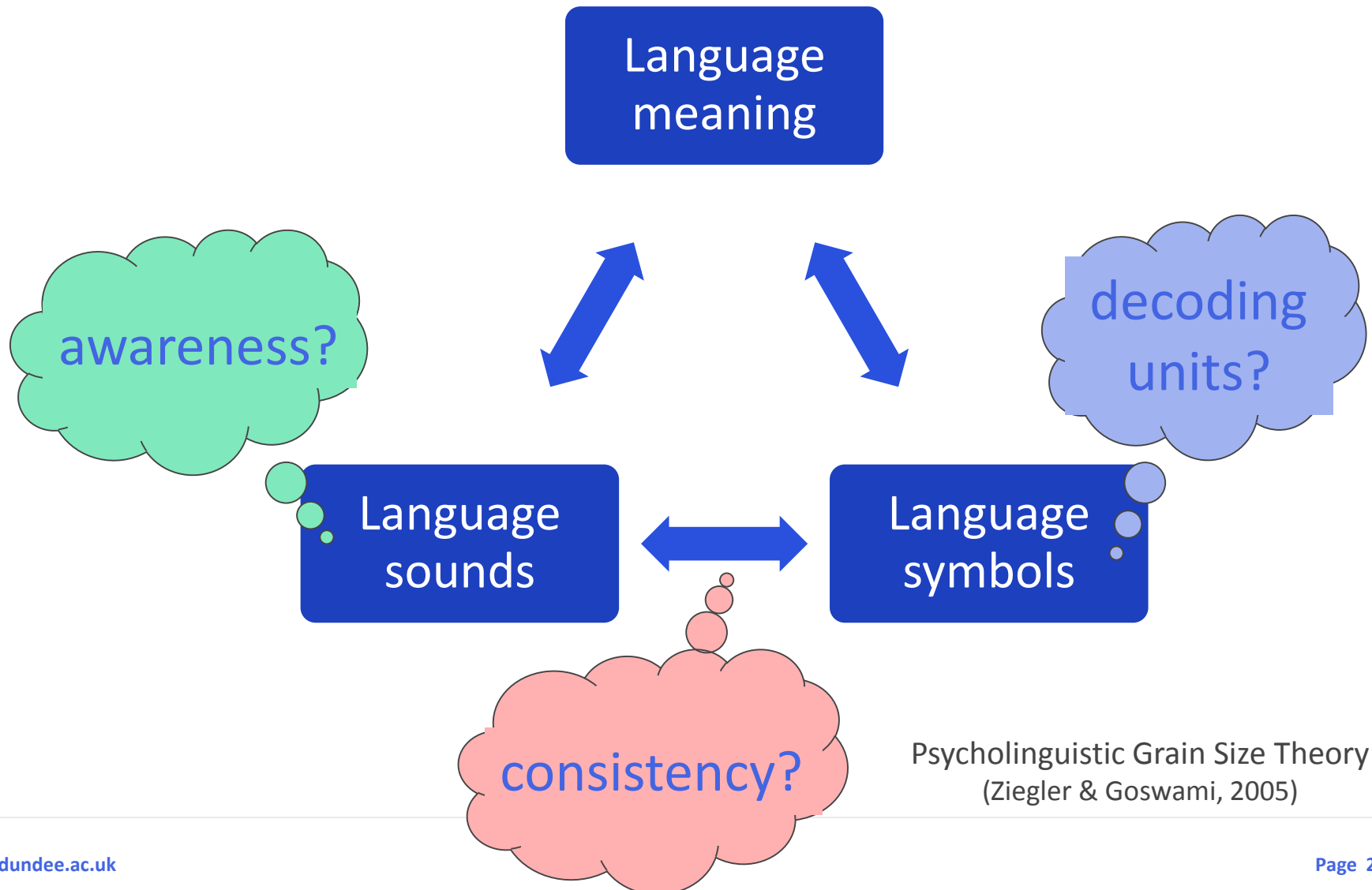
Language meaning

awareness?

decoding units?

Language sounds

Language symbols

consistency?

Psycholinguistic Grain Size Theory
(Ziegler & Goswami, 2005)

Transfer between L1 and L2?

2 views of relationship between L1 and L2 skills

Linguistic interdependence (Cummins, 1979)

→ the general metalinguistic processes that underlie L1 literacy acquisition become available when learning an L2

Script-dependence (Geva & Siegel, 2000)

→ the characteristics of the script may imply different processes underlying L1 and L2 literacy acquisition

Phonological awareness

L1 phonological awareness predict L2 reading skills for:

→ same-alphabet language pairings (e.g. Durgunoğlu et al (1993)

→ different-alphabet pairings (e.g. Abu Rabia, 2001)

Phonological awareness has been identified as a language-general skill that can contribute to both L1 and L2 literacy acquisition

Learning an L2 at secondary school

French-speaking participants in Grades 6 and 8 who are learning English at secondary school

→   receive from 3 to 4 hours of English teaching per week

→   exposure to the L2 spoken language is very limited

→   importance of written language in determining exposure to L2 is high

Same-alphabet comparison

Commissaire, Duncan & Casalis (2011)

Transfer of spelling pattern recognition ability
L1 to L2

French (L1) spelling pattern knowledge

→ poteau vs. potau

→ acide vs. asside

English (L2) spelling pattern knowledge

→ rain vs. rane

→ speech vs. speach

Grade 6: no evidence of transfer
Grade 8: knowledge of L1 spelling patterns predicted knowledge of L2
spelling patterns = transfer
(after controlling L1 reading and L2 vocabulary)

Commissaire, Duncan & Casalis (2011)

Does knowing how to read in L1 help with reading L2?
reflections for practice

For transfer, consider importance of L1-L2 similarity

→   between orthographic symbols

→   in language sounds

→   in type of sounds represented

→   in orthographic depth

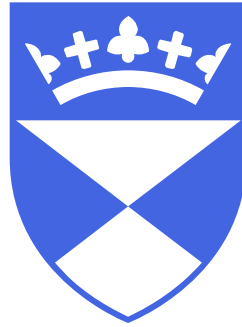L2 vocabulary growth
is also valuable for
L2 reading progress

Collaborators

Séverine Casalis, Eva Commissiare, São Luís Castro, Sylvia Defior, Philip H.K. Seymour, Sheila Baillie, Jacqueline Leybaert, Philippe Mousty, Nathalie Genard, Menelaos Sarris, Costas Porpodas, Rannveig Lund, Baldur Sigurðsson, Anna Þráinsdóttir, Ana Sucena, Francisca Serrano

Acknowledgements

The school children and teaching staff from schools around Europe made this work possible

Thank you!

dundee.ac.uk