



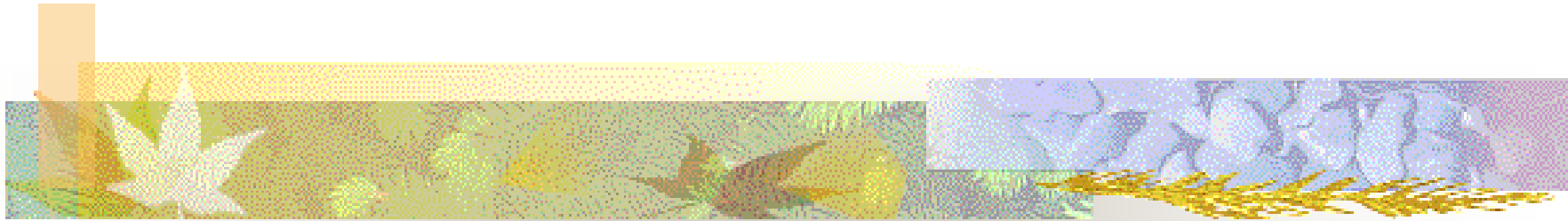
Reading Patterns of Average and Disabled Readers in Chinese

Fuk Chuen Ho and Trevor Bond

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Ho, Fuk Chuen and Bond, Trevor (2009) Reading Patterns of Average and Disabled Readers in Chinese.
In: Reinelt, R. (Ed.) (2009) Into the Next Decade with (2nd) FL Teaching Rudolf Reinelt Research Laboratory EU Matsuyama, Japan, p. 352-373.

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Dual route theories of word identification

- Lexical procedure: direct access, unmediated by phonology
- Sub-lexical procedure: phonological conversion processes
(Coltheart, 1978)
- Use of procedure: depending on readers' purposes and skills.




Role of Sub-lexical Procedure in English


- A large body of evidence indicates that skills in sub-lexical procedure are important in successful reading and spelling acquisition in English (e.g. Vandervelden & Siegel, 1995).
- The most distinguishing characteristics of children with learning disabilities in reading appear to be their deficits in sub-lexical procedure (Wolf & Bowers, 1999).




Role of Lexical Procedure in Chinese

- Lexical procedure is used to read in logographic writing systems (e.g., Chen, 1993; Zhou, Marslen-Wilson, Shu, Bi, & Tang, 1996; Zhou, Shu, Bi, & Shi, 1999)

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- The symbol-sound correspondences in Chinese are simpler than those in English (Perfetti & Tan, 1999; Tan & Perfetti, 1998).
 - The analysis of phonemes in consonant-vowel-consonant-consonant (CVCC) and CCVC words is not required as this type of phonemes is nonexistent in Chinese (Huang & Hanley, 1995) .


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- The pronunciation of a Chinese character can be derived from the phonological value of the phonological radical of the character.
 - 青 is a character, which means green and sounds tsing¹. 青 itself can also be a radical for compound characters, such as 情 (meaning: love; sound: tsing⁶), 清 (meaning: clear ; sound: tsing⁷) and 晴 (meaning: sunny; sound: tsing⁴).

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- About 85% of Chinese characters are compound words (Perfetti & Tan, 1999).
 - In only about 25% of compound characters, the phonetic radical provides the full pronunciation of the character (Hoosain, 1991), and in approximately 39% it provides guidance of the compound characters (Perfetti, Zhang, & Berent, 1992).



Different Kinds of Words

- *regular (words which give phonetic hints)*
- *irregular (words which do not give phonetic hints)*
- *pseudowords (words which have no meaning, but give phonetic hints)*

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- Irregular words (by lexical procedure)
 - Pseudowords (by sub-lexical procedure)
 - Regular words (by lexical or sub-lexical Procedure)



Purpose of Study

- The present investigation, therefore, focused on identifying the reading patterns of average and disabled readers in reading different kinds of words in the Chinese writing system




Method

■ Participants

■ 53 children with LD

- The mean age : 10.11 (S.D. 1.08)
- Participants of Intensive Remedial Teaching Programme (IRTP)
- Primary Year 3, 4 and 5 students
- At least two years of schooling; and
- Free from severe emotional or behavior problems

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- 44 Primary Year 3-5 students in regular classes were randomly chosen as a comparison.
 - The average age : 10.00 (S.D. 1.16)



Stimulus materials

- 3 sets of single-character words (regular, irregular, and pseudoword)
 - Each set contained 30 words of one type.



Design

- A repeated measures experimental design was used.
- Rasch Model was used to analyze the performance of different types of readers in reading the three categories of words.



Procedure

- Participants were required to read the lists of regular, irregular and pseudoword words.
- Each child was withdrawn from class for individual testing
- A period of approximately 25 minutes.



Result

Average Readers

5.0
4.0
3.0
2.0
1.0
.0
-1.0
-2.0
-3.0



48

31

36 41

67 90

7

6

50 51 52 53 57

40

56

77

66 87

84

63 64 72

5 23

1

54

68 75

35

74 82

10

18 30

37

61 80

12 22

62

27

47

71

43

65 86

24 26

73

8

58

69

78 88

33

76 81

9

42 55

79 83

4

39

70

20 28

17

34

Disabled Readers

4.0
3.0
2.0
1.0
.0
-1.0
-2.0
-3.0
-4.0

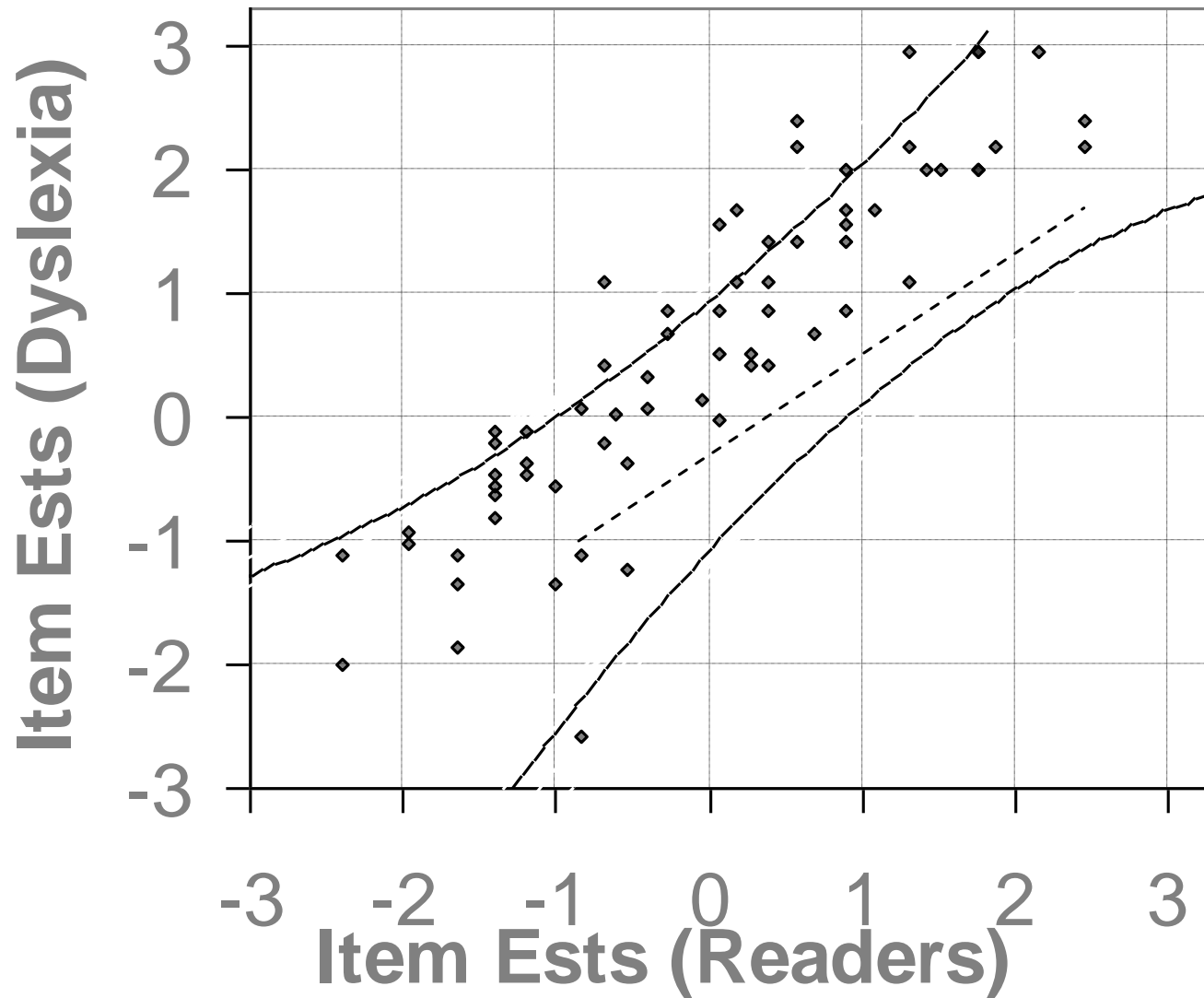
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68 82
66 89
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73 74
62 71
61 79
76 81 83 86
78 85
65 69
88
70



Common Item Linking



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- Both average and disabled readers had similar patterns of performance in reading three categories of words.
 - Reading irregular words was more difficult than the other two categories of words
 - In general, the level of difficulty in pseudowords was similar to that of regular words.



Implications

- Both average and disabled readers used similar routes to read.
- This study showed that reading irregular words was more difficult than reading regular words and pseudowords.
- It is important to strengthen the lexical procedure as there is a higher percentage of irregular words in Chinese.
- Both kinds of readers were able to use sub-lexical procedure to read pseudowords as efficient as that of regular words.