

**LEARNING TO READ
IN A SECOND LANGUAGE**

Fred Genesee
McGill University

CARLA, Oct. 18, 2008
Minneapolis

1

acknowledgments



2

ROAD MAP

- * reading outcomes in immersion in general
- * reading outcomes for specific groups of learners
- * individual differences study
- * implications

3

**READING OUTCOMES for
IMMERSION STUDENTS IN GENERAL**

French Reading (decoding & comprehension) Skills

Immersion = Native speakers > Non-immersion

4

**STUDENTS from DISADVANTAGED
SOCIO-ECONOMIC BACKGROUNDS**

- Socio-economic disadvantage puts children at risk for low achievement in any school program
- Does socio-economic disadvantage put children at greater risk in immersion than in L1 program?

Immersion Students = Non-immersion students

5

**STUDENTS with LOW GENERAL
INTELLECTUAL ABILITY**

Low levels of general intellectual ability put students at risk for low achievement in any school program

Are such students at greater risk in immersion than L1 program?

below average Immersion Students = below average non-Immersion students

6

WHAT ELSE DO WE NEED TO KNOW?

- * gaps in knowledge:
 - talented readers
 - struggling readers
 - at-risk readers
- identification of at-risk readers
- * support for at-risk readers
- * role of the L1 in L2 reading instruction for all immersion students

7

STUDY OF INDIVIDUAL DIFFERENCES IN IMMERSION (Erdos, Genesee, Savage & Haigh)

Question 1:

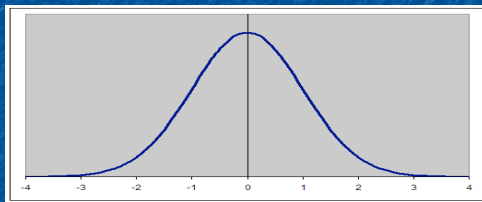
Is risk for reading difficulties different from risk for language learning difficulties?

Why?

- ▶ disentangling learning disabilities and difficulties

8

INDIVIDUAL DIFFERENCES & LOW PERFORMING STUDENTS



Disability:

- language impairment
- reading impairment

* learning difficulty:

- reading delay
- * L2 proficiency

9

IMMERSION READING STUDY

Question 2:

Can we use first language (L1) indices to predict second language (L2) reading outcomes & difficulties?

Why?

- ▶ evidence of cross-linguistic "transfer" in domains related to reading and academic language
(Genesee, Lindholm-Leary, Saunders & Christian, 2006)
(August & Shanahan, 2006)

10

IMMERSION READING STUDY

Question 3:

How early in schooling can L1 indices be used to predict L2 reading outcomes?

Why?

- ▶ evidence that early reading intervention reduces rates of later reading disability (Scanlon, 2008)

11

IMMERSION READING STUDY

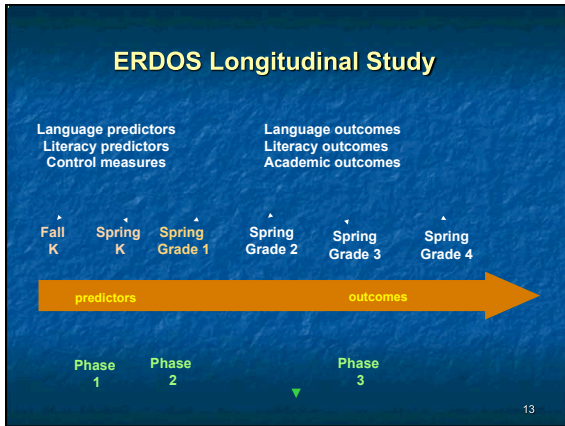
Question 4:

Are predictors of word reading the same as predictors of reading comprehension?

Why?

- ▶ Evidence of greater improvement when intervention is fine-tuned to respond to student's specific difficulties

12



PARTICIPANTS

- Montreal: early total French immersion
- Monolingual English or English-dominant bilinguals (n=86)
- first tested in fall of Kindergarten
- typically-developing and potentially at-risk children
- Individual sessions: oral & written language testing
- Literacy testing prior to literacy instruction

14

KINDERGARTEN PREDICTORS

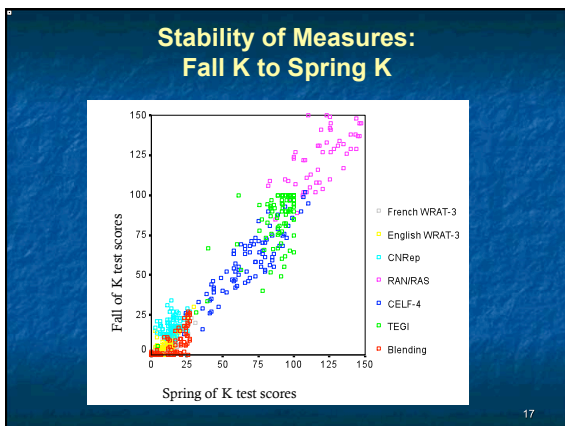
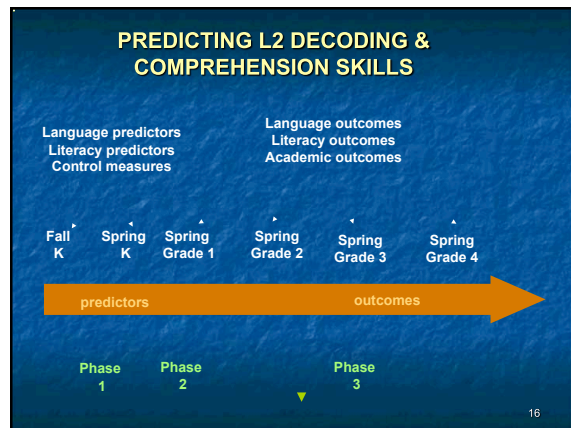
READING TASKS

- Phonological Awareness
 - Blending
 - Elision
 - TAAS
 - TAAF
- Lexical Access
 - RAN/RAS
- Phonological Working Memory
 - CNREP
 - WMTB-C
- Letter-sound and letter-name knowledge

LANGUAGE TASKS

- Receptive vocabulary: E, F
- Expressive vocabulary (EOWPVT)
- Listening Comprehension
 - CELF: Concepts & Following Directions
- Receptive grammar
 - CELF: Sentence Structure
- Expressive grammar
 - CELF: Word Structure
 - CELF: Form: Sentences
 - TEGI: pres tense 3rd pers-s, past tense
- Phonological working memory
 - CNRep
 - French non-word repetition
 - WMTB-C

15



Principal Components Analysis: Kindergarten

Fall

	Component		
	"Lang1"	"L1"	"Age"
Age	0.77	-0.68	0.31
Blending	0.48	0.81	0.51
Letter sound knowledge	0.49	0.87	-0.16
WRAT-3	0.33	0.14	-0.07
RAN/RAS objects	-0.66	-0.19	-0.12
CNRep	0.58	0.73	0.59
CELF-4 cld	0.78	0.12	0.16
CELF-4 rs	0.59	0.35	-0.18
RAVEN's CPM	0.58	-0.05	-0.19
TEGI screening test	0.68	0.21	-0.13

Unique variance: 28% 26% 11%

Spring

	Component		
	"L1"	"Lang"	"Age1"
Age	-0.52	0.05	0.78
Blending	0.24	0.29	0.17
Letter sound knowledge	0.78	0.14	0.14
WRAT-3	0.11	-0.16	-0.15
RAN/RAS objects	-0.47	-0.42	0.06
CNRep	0.27	0.38	0.38
CELF-4 cld	0.63	0.03	0.08
CELF-4 rs	0.13	0.37	0.78
RAVEN's CPM	0.33	0.43	-0.28
TEGI screening test	0.33	0.16	0.49

Unique variance: 26% 24% 12%

⇒ separate risk profiles

18

KINDERGARTEN RESULTS

- there is considerable stability from Fall to Spring of K in predictor measures
- ⇒ Fall-K reading predictors in English could be useful to identify students who need additional support in reading
- predictor measures suggest distinct risk profiles for reading and language difficulty
- ⇒ important to distinguish between different kinds of learning difficulties/disabilities to design appropriate support

19

PREDICTING L2 DECODING & COMPREHENSION SKILLS

Language predictors
 Literacy predictors
 Control measures

Language outcomes
 Literacy outcomes
 Academic outcomes

Fall K Spring K Spring Grade 1 Spring Grade 2 Spring Grade 3 Spring Grade 4

predictors → outcomes

Phase 1 Phase 2 Phase 3

20

SIMPLE VIEW OF READING

Gough & Tunmer (1986)

$$RC = LC \times D$$

reading comprehension (RC)
 is the product of
 listening comprehension (LC)
 and decoding (D)

21

K-1 PREDICTION RESULTS

FALL PREDICTORS		SPRING PREDICTORS	
WORD DECODING	COMPREHENSION	WORD DECODING	COMPREHENSION
ENG letter-name knowledge	blending in English	ENG letter-name knowledge	blending in English
FR Receptive vocabulary	ENG. letter-name knowledge	blending in English	ENG letter-name knowledge
	ENG rapid naming	FR receptive vocabulary	ENG rapid naming
	FR receptive vocabulary		FR receptive vocabulary
$R^2 = 24\%$	$R^2 = 55\%$	$R^2 = 48\%$	$R^2 = 67\%$

22

SUMMARY OF GRADE 1 PREDICTIONS

DECODING:

- letter-name scores in English predict word/pseudo-word decoding in French in Grade 1
- knowledge of French also helps
- Spring predictors are better than Fall predictors (23/46%)

COMPREHENSION:

- letter-name + blending + language-related scores in English predict reading comprehension in French in Grade 1
- knowledge of French helps
- Spring predictors are better than Fall predictors (52/65%)

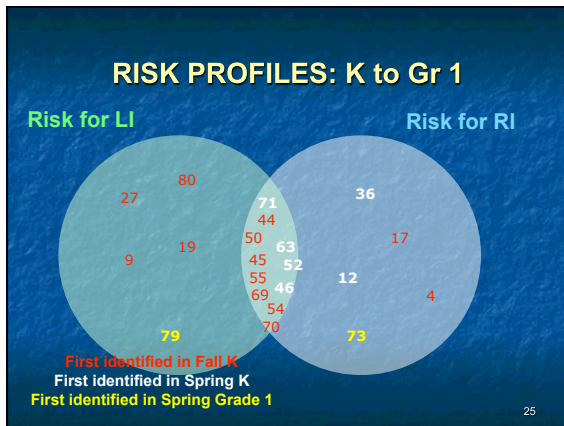
23

INDIVIDUAL DIFFERENCES & LOW PERFORMING STUDENTS

Disability:
 • reading impairment
 • language impairment

★ learning difficulty:
 • reading delay
 • L2 proficiency

24



Predicting High and Low Risk for L2-Reading Impairment in Grade 1

Fall of K		Spring of K	
	Function		Function
Blending	.442	Blending	.702
TEGI-3rd person	.238	TEGI-3rd person	-.179
TEGI-past tense	-.871	TEGI-past tense	.068
CELF-4 rs	.385	CELF-4 rs	.420
WRAT-3 Letters	.915	WRAT-3 Letters	.217
WRAT-3 Words	-.344	WRAT-3 Words	-.096
RANRAS objects	-.352	RANRAS objects	.048
CNRep	.370	CNREP	.261

Predicted group membership:
 At-risk: 88%
 Not at-risk: 78%

Predicted group membership:
 At-risk: 88.2 %
 Not at-risk: 81%

26

Predicting High and Low Risk for L1-Language Impairment in Grade 1

Fall of K		Spring of K	
	Function		Function
Blending	.223	Blending	.197
TEGI-3rd person	-.113	TEGI-3rd person	-.145
TEGI-past tense	.360	TEGI-past tense	.155
CELF-4 rs	.595	CELF-4 rs	.868
WRAT-3 Letters	-.051	WRAT-3 Letters	.066
WRAT-3 Words	-.009	WRAT-3 Words	.005
RANRAS Objects	-.438	RANRAS objects	-.068
CNRep	-.155	CNREP	-.121

Predicted group membership:
 At-risk: 71.4%
 Not at-risk: 75%

Predicted group membership:
 At-risk: 86.4%
 Not at-risk: 75%

27

- ### SUMMARY & IMPLICATIONS
- risk for reading and language difficulty can be distinct, and often are
 - a significant proportion of at-risk children are at-risk for both language and reading difficulty
 - important to identify students with one, the other, or both → devise individualized educational programs
 - L1 predictors can provide reasonable identification of immersion students who might have later reading difficulties
- 28

- ### IMPLICATIONS continued...
- identification of risk for reading difficulty can be made as early as Fall K, but improves if done in Spring K
 - risk for decoding and comprehension development entail different difficulties:
 - decoding: phonological awareness (blending) and knowledge of the alphabetic principle are the best unique L1 predictors of L2 reading outcomes in immersion → small unit skills
 - comprehension: decoding skills + language skills (??) – small + big unit skills
 - knowledge of French at entry to K also helps
- 29

- ### More implications...
- in general, predictors of reading and language difficulty in immersion students are the same as those identified for students in L1-programs
 - *Simple View of Reading* applies to L2 reading
 - rates of reading and language difficulty in immersion are very similar to those reported for students in L1 programs (Catts et al. 2005):
 - both RI and LI 15% (Imm: 13%)
 - only RI 8 % (Imm: 6%)
 - only LI 6 % (Imm: 6%)
- 30

Still more....

- likely that effective interventions/support for at-risk immersion students will be the same as those that are effective for students in L1-programs:
 - decoding: work on small unit skills – phonological awareness & letter-sound/name knowledge
 - comprehension: work on both small unit and bigger language skills – still have poor understanding of what these might be
 - must build proficiency in language in primary grades so that reading comprehension in higher grades does not stall: learning to reading – reading to learn

31

One last thought...

- contrary to conventional wisdom, keeping languages completely separate in immersion may not be the best strategy
- evidence of significant cross-linguistic transfer of skills related to reading, especially decoding
- strategic use of L1 may facilitate L2 reading development – more from Roy Lyster (later)

32

THE END

thank you

33