LEARNING TO READ IN A SECOND LANGUAGE

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ROAD MAP

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

READING OUTCOMES for IMMERSION STUDENTS IN GENERAL

French Reading (decoding & comprehension) Skills
Immersion = Native speakers > Non-immersion

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

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 = non-Immersion students
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

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

INDIVIDUAL DIFFERENCES & LOW PERFORMING STUDENTS

<table>
<thead>
<tr>
<th>Disability</th>
<th>Learning difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>language impairment</td>
<td>reading delay</td>
</tr>
<tr>
<td>reading impairment</td>
<td>L2 proficiency</td>
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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)

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 (Sandor, 2008)

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
Phase 1

Phase 2

Phase 3

Predictors

Outcomes

KINDERGARTEN PREDICTORS

READING TASKS
- Phonological Awareness
- Blending
- Elision
- TTAAP
- TAP
- Lexical Access
- RANSOM
- Phonological Processing Memory
- CONSKIL
- WMF
g

LANGUAGE TASKS
- Rote vocabulary, E, F
- Expressive vocabulary
- (FGNPV)
- Listening Comprehension
- CELF Disagreement & Following Directions
- Receptive grammar
- CELF: Sentence Structure
- Expressive grammar
- CELF: Word Structure
- CELF: Form Sentences
- HEO: Present tense, past, present
- Phonological working memory
- CNRep
- French non-word repetition
- WMF
g

Phase 1

Phase 2

Phase 3

ENGLISH PREDICTORS

READING TASKS
- Phonological Awareness
- Blending
- Elision
- TTAAP
- TAP
- Lexical Access
- RANSOM
- Phonological Processing Memory
- CONSKIL
- WMFG

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Phase 1

Phase 2

Phase 3

PREDICTING L2 DECODING & COMPREHENSION SKILLS

Language predictors

Literacy predictors

Control measures

Academic outcomes

Fall

Spring

Grade 1

Grade 2

Grade 3

Grade 4

Fall

Spring

Grade 1

Grade 2

Grade 3

Grade 4

Stability of Measures: Fall K to Spring K

Principal Components Analysis:

Kindergarten

Fall

Spring

Language predictors

Literacy predictors

Control measures

Academic outcomes

Fall

Spring

Grade 1

Grade 2

Grade 3

Grade 4

Unique variance: 28% 26% 11% Unique variance: 24% 24% 12%

⇒ separate risk profiles
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.

PREDICTING L2 DECODING & COMPREHENSION SKILLS

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<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<tr>
<td>Language predictors</td>
<td>Language outcomes</td>
<td>Academic outcomes</td>
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<tr>
<td>Literacy predictors</td>
<td>Control measures</td>
<td>Literacy outcomes</td>
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SIMPLE VIEW OF READING
Gough & Tunmer (1986)

\[ RC = LC \times D \]

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

K-1 PREDICTION RESULTS

<table>
<thead>
<tr>
<th>FALL PREDICTORS</th>
<th>SPRING PREDICTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORD DECODING</strong></td>
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</tr>
<tr>
<td>ENL letter-name knowledge</td>
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</tr>
<tr>
<td>FR Receptive vocabulary</td>
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<table>
<thead>
<tr>
<th>COMPREHENSION</th>
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<tr>
<td>Reading in English</td>
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</tr>
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<td>FR receptive vocabulary</td>
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\[ R^2 = 24\% \]
\[ R^2 = 55\% \]
\[ R^2 = 49\% \]
\[ R^2 = 67\% \]

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%).

INDIVIDUAL DIFFERENCES & LOW PERFORMING STUDENTS

- Disability:
  - Reading impairment
  - Language impairment
- Learning difficulty:
  - Reading delay
  - L2 proficiency
Predicting High and Low Risk for L2-Reading Impairment in Grade 1

<table>
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<tr>
<th>Fall of K</th>
<th>Spring of K</th>
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<tr>
<td>Predicted group membership: At-risk: 88% Not at-risk: 81%</td>
<td></td>
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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 to devise individualized educational programs.
- L1 predictors can provide reasonable identification of immersion students who might have later reading difficulties.

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 challenges.
  - 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 (77%) – small + big unit skills.
  - Knowledge of French at entry to K also helps.

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 L1 15% (imm: 13%)
  - Only RI 8% (imm: 6%)
  - Only L1 6% (imm: 6%)
Still more....

- likely that effective interventions/support for at-risk immersion students will be the same as those that are effective for students in LI 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

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 I1 may facilitate I2 reading development – more from Roy Lyster (later)

THE END

thank you