

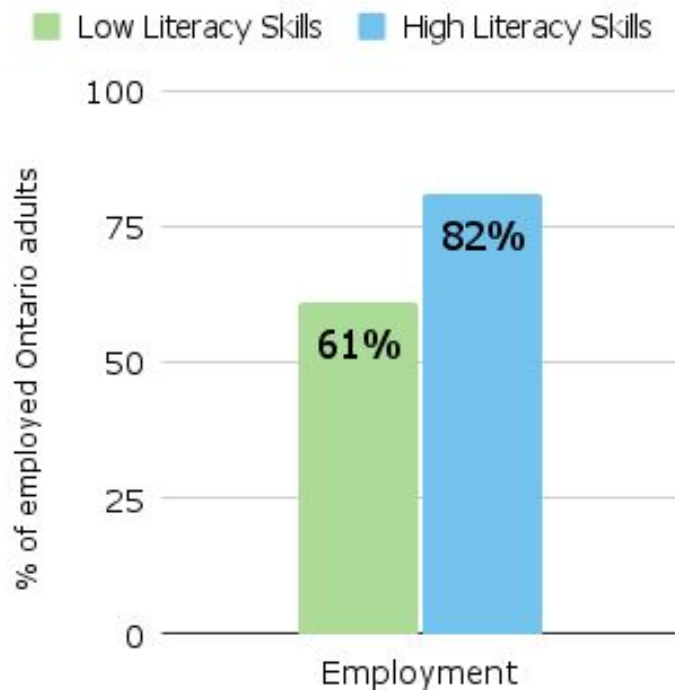


IMPROVING READING CURRICULA

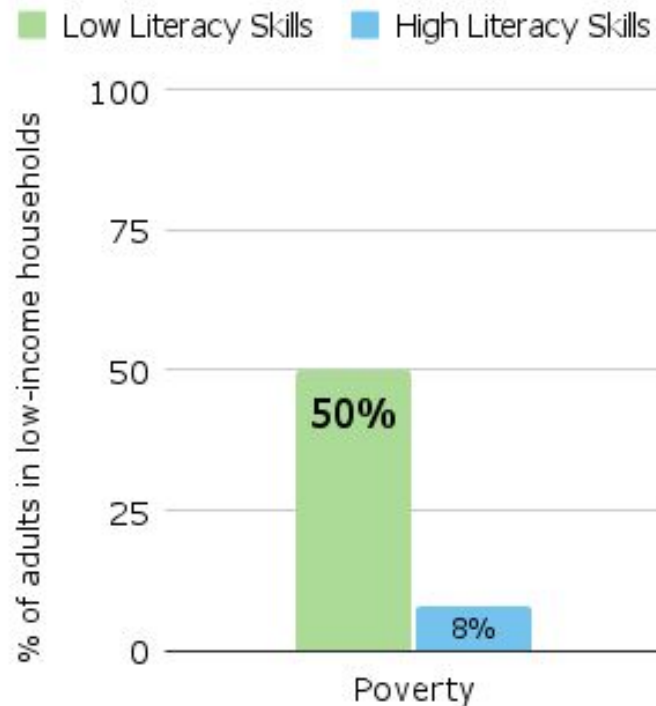
EMMA ABRAMS, IRYS CHAMPAGNE, YIANNIE LIN, HANNAH ROGNAN, SHYSTA SEHGAL, AND
PROFESSOR BLAIR ARMSTRONG

IMPORTANCE OF READING

Literacy and Employment Rates



Literacy and Poverty





RIGHT TO READ REPORT

ONTARIO HUMAN RIGHTS COMMISSION (2019)

"READING ACHIEVEMENT FOR ONTARIO STUDENTS IS CONCERNING, BUT THE OUTCOMES FOR [VULNERABLE] STUDENTS ARE EVEN MORE TROUBLING."

"THESE STUDENTS RELY ON THE PUBLIC EDUCATION SYSTEM TO GIVE THEM A STRONG FOUNDATION IN READING... WHEN THE EDUCATION SYSTEM DOES NOT DO THIS, IT CAN WORSEN THEIR MARGINALIZATION"

"SCIENCE-BASED CURRICULUM AND CLASSROOM INSTRUCTION ARE THE FOUNDATION FOR MEETING THE RIGHT TO READ"



HOW SHOULD WE TEACH READING?

* TWO COMPETING VIEWPOINTS

Phonics

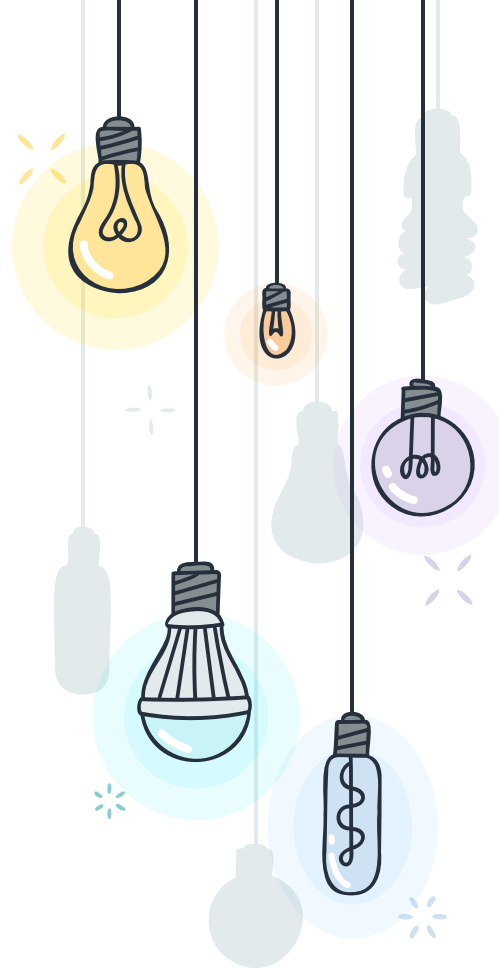
The sounds that letters make
are explicitly taught

Ex. <s> → /s/

Whole Language

Letter-sound
correspondences are learned
implicitly by being in a
literacy-rich environment

Ex.



* HOW IS READING (PHONICS) BEING TAUGHT?



Analyzed official curriculum resources (*JK - Grade 2*)

They are **vague** and **outdated**



 Ontario

Ministry of Education

REVISED

The Ontario Curriculum
Grades 1-8

Language

2006



HOW IS READING (PHONICS) BEING TAUGHT?

To connect with realities in the field, we consulted **teachers, education researchers,** and a **literacy consultant**

- + Schools/teachers/boards **vary greatly** in how they employ phonics
- + The most popular phonics programs are mostly **proprietary, costly** & have **unknown efficacy**



**Jolly Phonics Starter Kit Extended
(in print letters)**

\$439.15

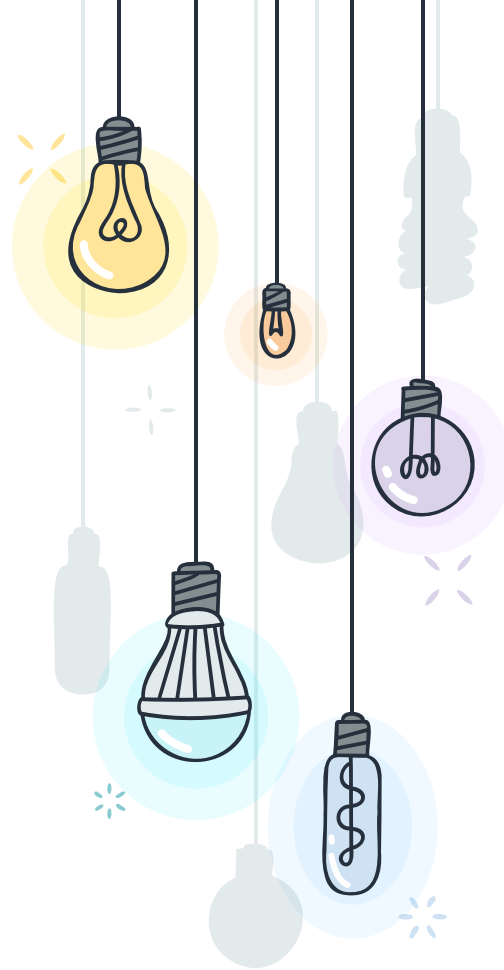
Phonics instruction is all over the map

* WHAT DO WE NEED IN SCHOOLS?

 We need effective **systematic phonics programs**

 We need to **narrow the gap** between academic research and classroom instruction

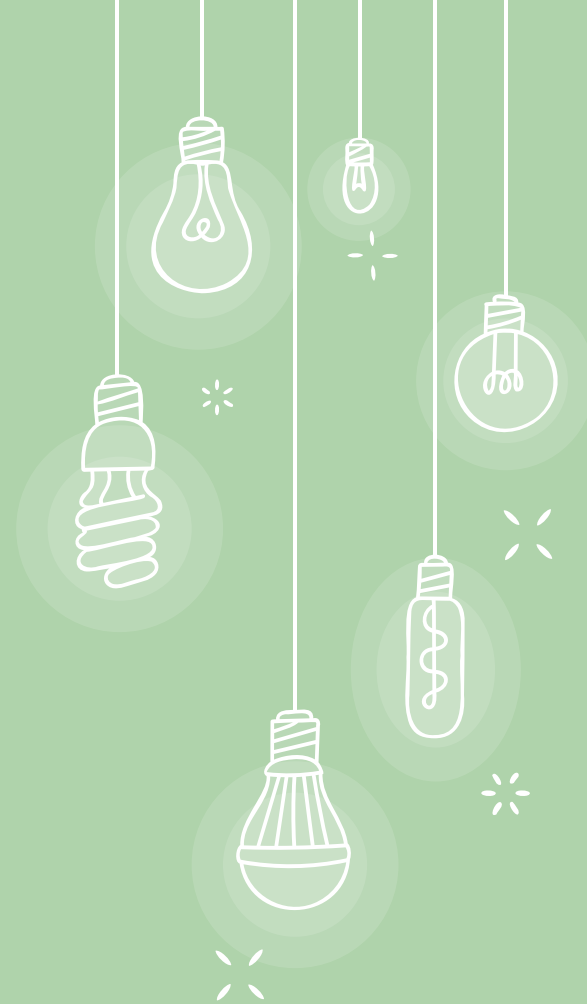
Phonics instruction is not monolithic - unknown variability in different curricula on factors influencing learning



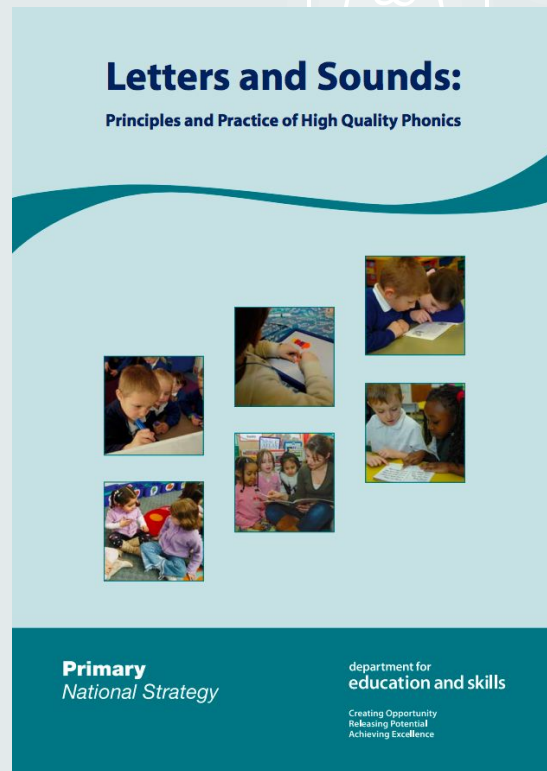
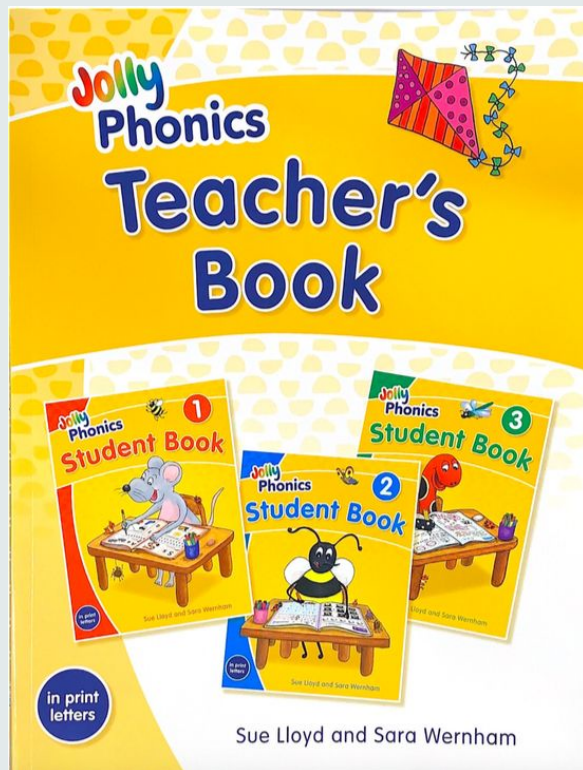


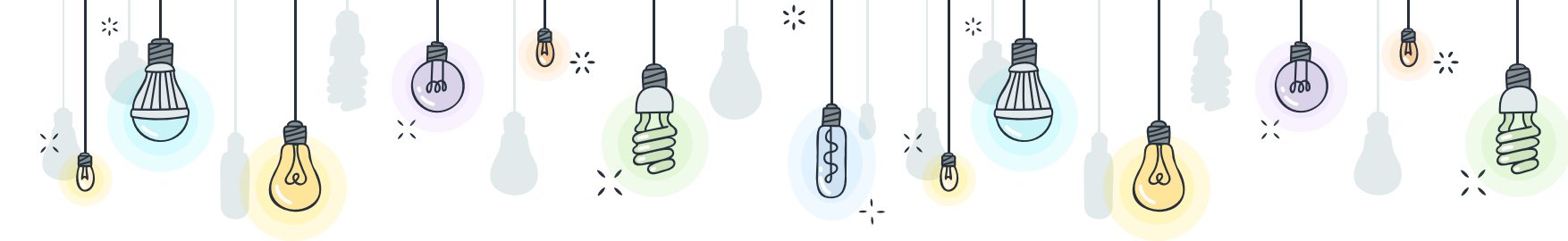
OUR GOAL

INVESTIGATE AND COMPARE WHAT IS
TAUGHT IN DIFFERENT LITERACY
CURRICULA



WHAT PHONICS PROGRAMS DID WE COMPARE?





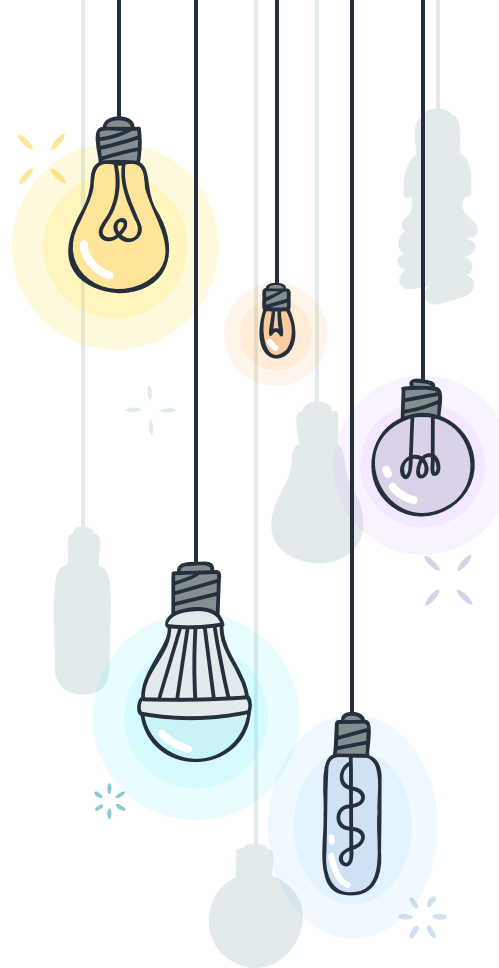
CODING CURRICULA

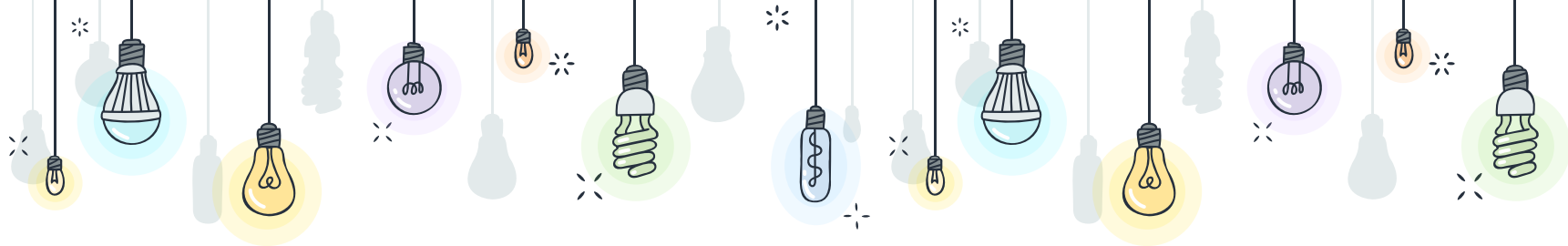
Source	Page Number	Type	Orthography	Phonology
Jolly Phonics Teacher's Book	39	Rule	a	æ
The Phonics Handbook	43	Example of a rule	sat	sæt
Jolly Phonics Teacher's Book	72	Exception to a rule	was	wΛz

COMPARING OUR TRANSCRIPTIONS TO * TRANSCRIPTION DATABASE

Word	Our Transcription	CMU Transcription
Trees	tʃɪz	tuiz
Song	sɑŋ	sɔŋ
Lemon	lɛmən	lɛmʌn

10% mismatch between transcriptions due
to IPA conventions / dialectal differences





COMPARISON OF THE CURRICULA (8 WEEKS)

	Jolly Phonics	Letters & Sounds
# of Rules Taught	44	31
# of Example Words Taught	835	264
# of Exception Words Taught	12	7

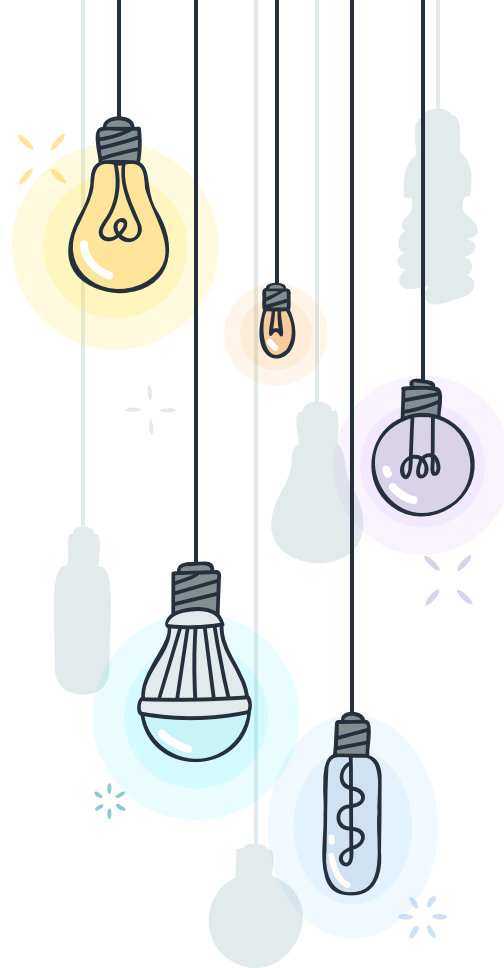
20 weeks



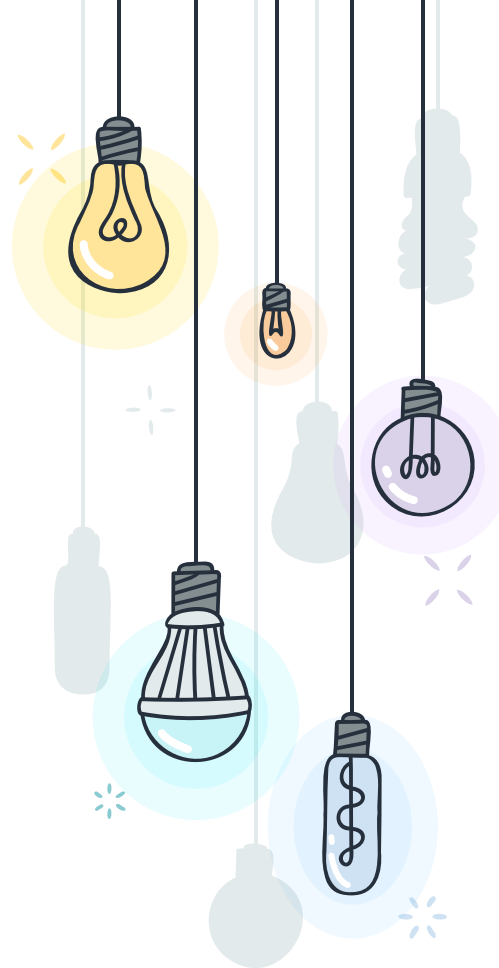
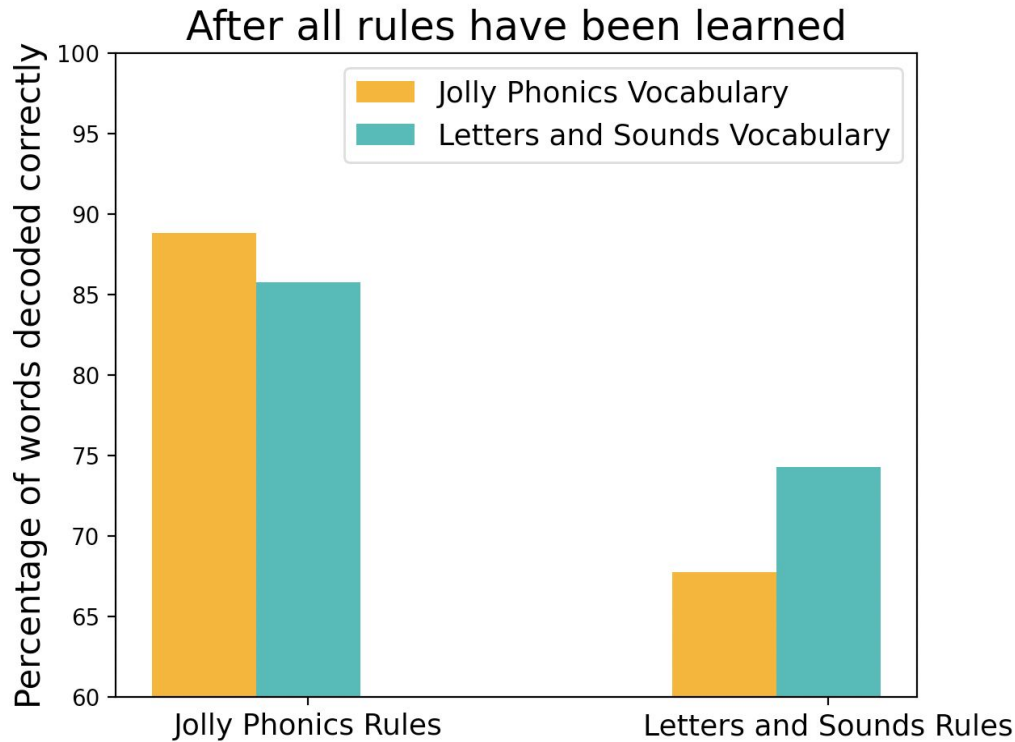
Letters & Sounds
49
883
27

HOW WELL CAN VOCABULARY TAUGHT IN EACH ✧ CURRICULA BE PRONOUNCED BY THE RULES

We analysed the **percentage of words**
that can be read correctly by the rules
taught in different curricula



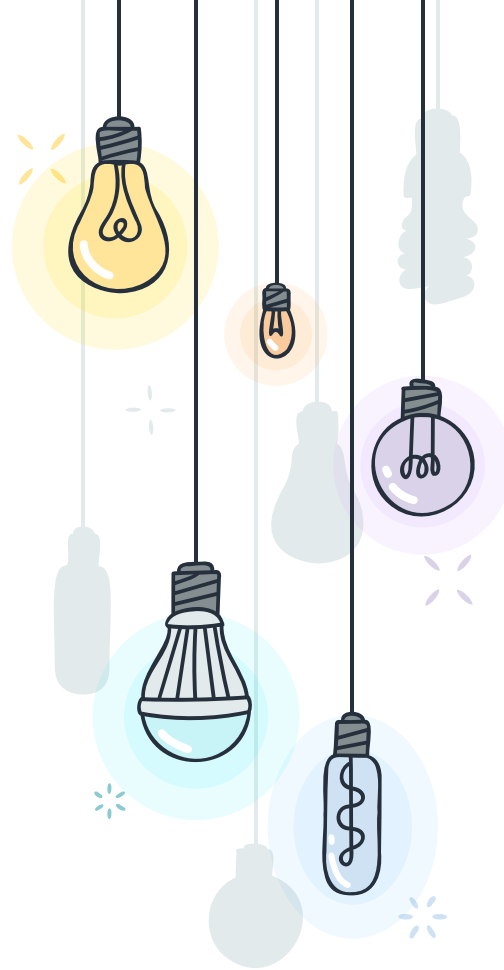
PERFORMANCE OF DIFFERENT RULE SETS AT READING TAUGHT VOCABULARY



* HOW VARIABLE ARE THE EXAMPLE WORDS IN EACH CURRICULUM?

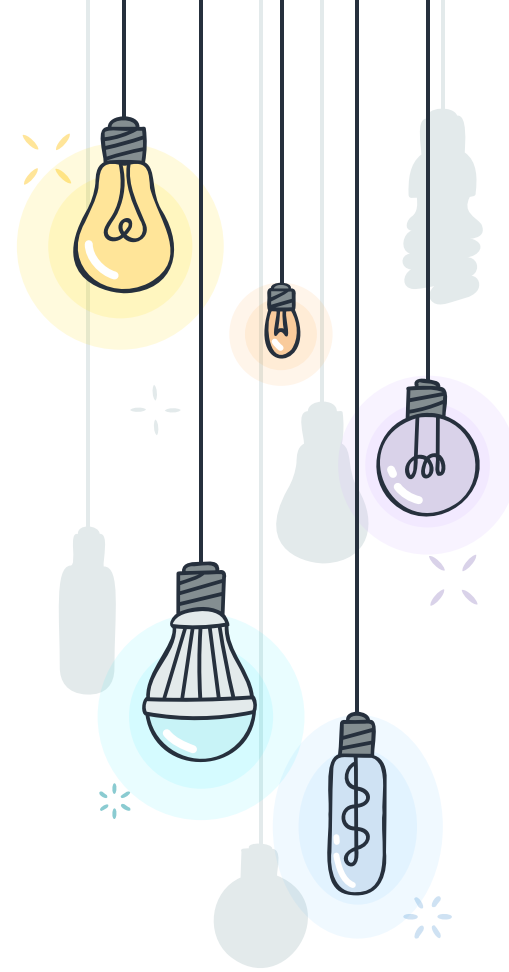


More varied word examples increases the likelihood of generalizing rules to new, unseen words.



* ORTHOGRAPHIC LEVENSHTEIN DISTANCE

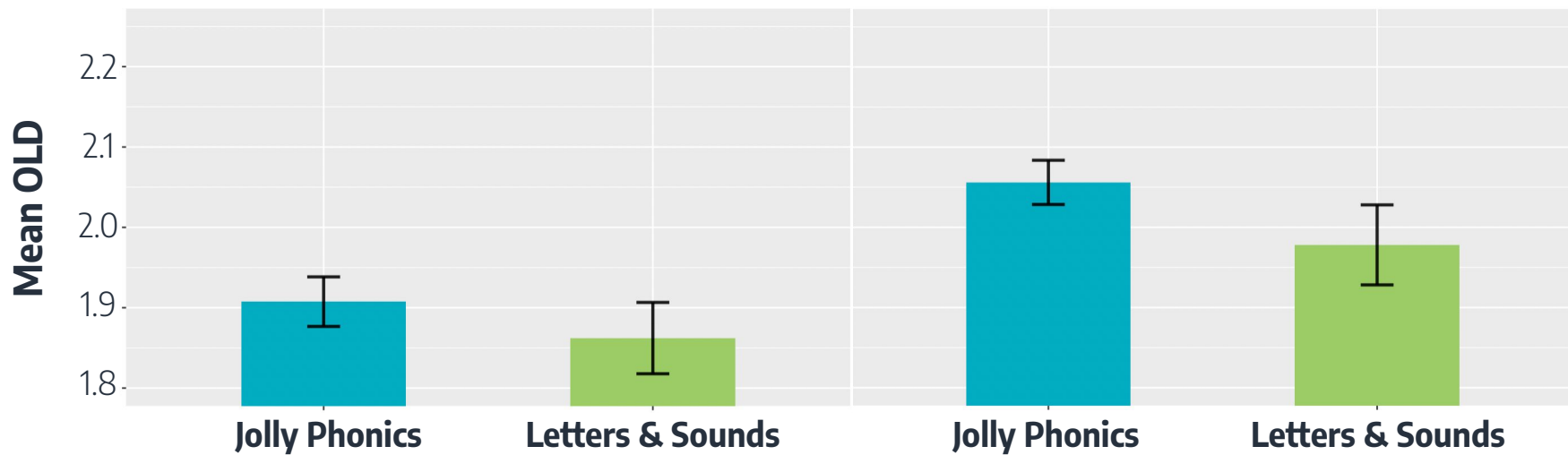
Less Variable Orthography	More Variable Orthography
<p>Cat<u>u</u> vs Can<u>a</u></p> <p>↓</p> <p>OLD Value</p>	<p><u>C</u>at<u>u</u> vs <u>P</u>an<u>a</u></p> <p>↓</p> <p>OLD Value</p>
<	








First Month

First Two Months

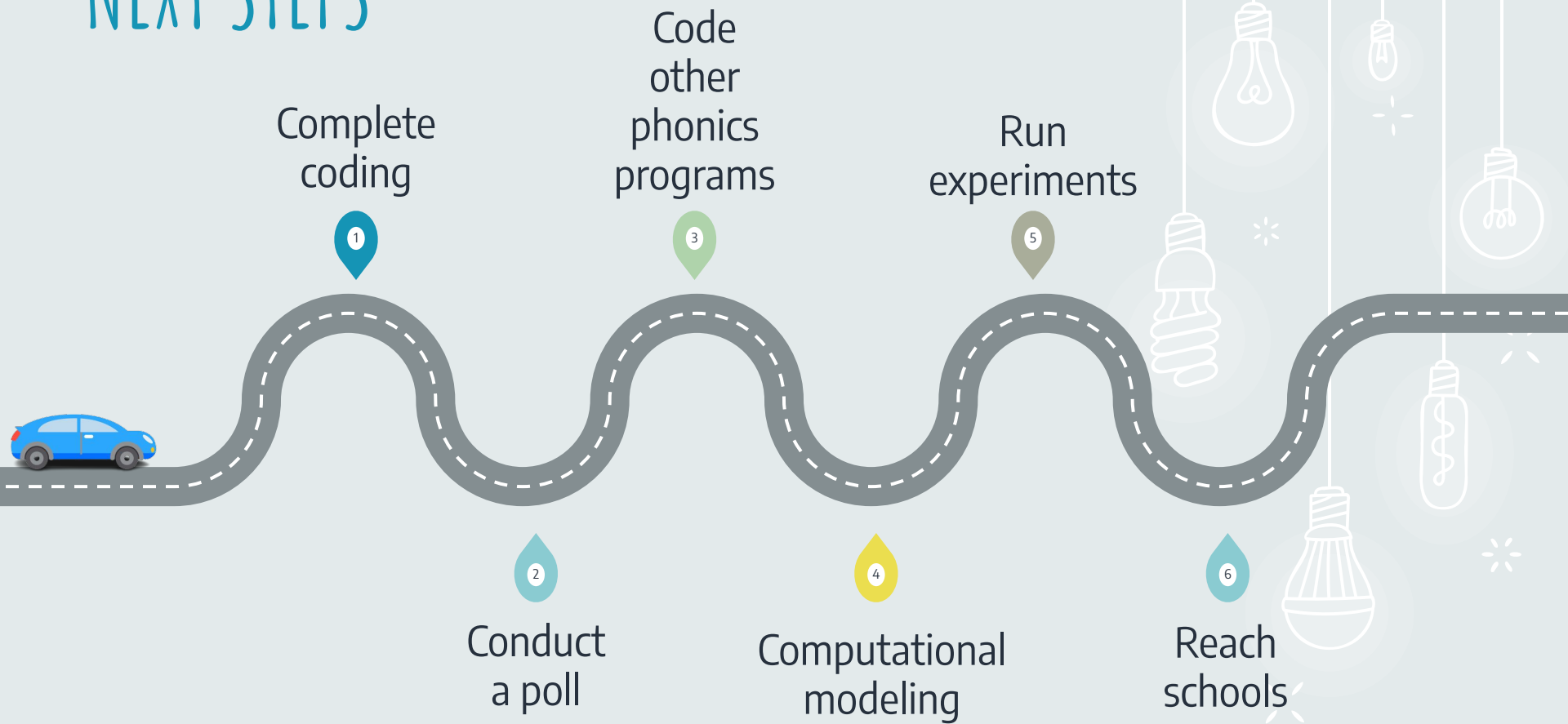


A decorative header featuring several hanging light bulbs of different shapes and sizes. Some bulbs are lit, emitting a glow, while others are unlit. The bulbs are suspended by thin black lines. The background is white with some faint, stylized light patterns.

PRELIMINARY CONCLUSIONS & TAKE AWAY POINTS

-  Reading is extremely important for later life outcomes, but there is a large gap between academic research on reading and classroom policies in Ontario
-  To improve this, we compared two different reading curricula
 -  Notable differences (many factors that could impact learning to read):
 - ★ How *quickly* **rules** are taught
 - ★ *Number of* **example words**
 - ★ *Variability of* **example words**
 - ★ *Effectiveness of* **rules** taught

NEXT STEPS



THANKS!

Any questions?

