Dalhousie University
Language &
Literacy Lab

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ADDRESSING THE ACHIEVEMENT AND OPPORTUNITY GAP IN NOVA SCOTIA:

IDENTIFYING THE LANGUAGE SKILLS THAT ENABLE CHILDREN TO SUCCEED IN LEARNING TO READ

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DALHOUSIE UNIVERSITY

Delmore "Buddy" Daye Learning Institute

SSHRC = CRSH

NSERC CRSNG

Education

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Land Acknowledgement

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights in Canada. We recognize that African Nova Scotians are a distinct people whose histories, legacies and contributions have enriched that part of Mi'kma'ki known as Nova Scotia for over 400 years.

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Meet the Research Team

Dr. Hélène Deacon
Lead Investigator

Dr. Deacon is a Professor in the Department of Psychology and Neuroscience, Director of the Language and Literacy Lab, and Co-Director of Ensuring Full Literacy in a Multicultural and Digital World. Deacon was recently named a Distinguished Research Professor at Dalhousie University, was elected to the Royal Society of Canada's College of New Scholars, and won the 2025 Carol Connor Mid-Career Award from the Society for the Scientific Study of Reading. Dr. Deacon is in the top 2% of researchers in the world.

The Research Team included a diverse group of postdocs, graduate and undergraduate students, volunteers, and research staff from the Language and Literacy Lab, as well as expert collaborators from across Canada and the UK. Our team brings together diverse expertise in developmental psychology, community, and linguistics.

Collaborators and Current Positions

Dr. Helen Breadmore, Professor & Deputy Director for Research and Impact Lead, School of Education (University of Birmingham)

Dr. Nicole Conrad, Professor & Chair, Psychology (Saint Mary's University)

Dr. Carrie Demmans Epp, Associate Professor, Computing Science (University of Alberta)

Dr. George Frempong, Director of Research (Delmore "Buddy" Daye Learning Institute)

Dr. Tamara Sorenson Duncan, former post-doctoral fellow on this project; currently Associate Professor, School of Linguistics and Language Studies (Carleton University)

Dr. Jenny Thomson, Professor, School of Allied Health Professions (Sheffield University)

Research Staff
Department of Psychology and Neuroscience, Dalhousie University

Stef Hartlin	Christian Guinard
Emma Hynes	Molly Staley
Lauren Gallant	Angelica Kibets

Staff trained through this project are now in clinical programs such as Occupational Therapy and School Psychology, and others are now practicing clinical psychologists.

Post Doctoral Fellows and Current Positions
Department of Psychology and Neuroscience, Dalhousie University

Dr. Émilie Courteau, current post-doctoral fellow and Adjunct Professor (Dalhousie University)

Dr. Sofia Giazitzidou, current post-doctoral fellow

Dr. Klaudia Krenca, Senior Data Analyst, Government of Ontario

Dr. Kyle Levesque, Senior Statistical Analyst, Government of Canada

Graduate Students
Department of Psychology and Neuroscience, Dalhousie University
Department of Education, Mount Saint Vincent University

Estelle Ardanouy	Mariam Elgendi	Elizabeth MacKay
Adena Cox	Savannah Heintzman	Lindsay Rosenberg
Emily Cote	Katie Hoferek	Alex Ryken
Danika Desroches	Rebecca MacDonald	Rebecca Tucker

Many graduate students previously involved in the project are now PhD Candidates in a wide range of programs including speech language pathology and school psychology, as well as Post-Doctoral Fellows in universities around the world; others are university instructors, practicing clinicians, and teachers. Working on this project set them up to contribute widely to education and community development.

Undergraduate Students

Daniel Basso	Sarah Dunphy	Elise Lynch	Jalyssa Shadbolt
Megan Bautista	George Faza	Arjun Litt	Jersey Smith
Sophie Bhaskara	Kaitline Fournier	Kirsty Longino	Victoria Smith
Emily Byrd	Lulu Groff	Leigha MacPherson	Emily Taylor
Montserrat Macias	Shada Hamed	Erin MacDougall	Jill Taylor
Rachel Chen	Ava Holman	Kaitlyn Mooney	Jillian Taylor
Seohyeon Cho	Marilla Hulls	Anika Nastasiuk	Sylvia Techmanski
Kirsten Claussner	Amy Hicks	Fatemah Saadat	Katie Standage
Braydon Cox	Jolena Klymshyn	Lina Schröter	Victoria Yarmey
			Daneesha Williams

Many former undergraduate team members have successfully gained places in competitive graduate and professional programs in a wide range of key areas, including medicine, public health, speech language pathology, and occupational therapy. Others have begun careers working in research, education, and other community-related professions.

What is the Research About?

This research examined how children's oral language skills support reading development across the elementary grades, identifying the specific components of oral language skills that are essential for strong reading comprehension. Our approach is grounded in the idea that learning to read is rooted in oral language, and so we need to pinpoint which oral language skills matter most – and when. In alignment with the Inter-University Research Network (IURN) mandate, our goal was to inform practices that foster positive learning environments and ensure that all children, regardless of background, have opportunities to develop the reading skills necessary for academic success and overall well-being.

For this study, we recruited students from a range of backgrounds, with a special focus on African Nova Scotian learners, as well as learners experiencing economic exclusion and poverty in Nova Scotia. To identify those experiencing economic exclusion and poverty, we asked parents to describe their occupations, marital status, and educational background, which allowed us to calculate socioeconomic status based on established practices (Hollingshead, 1975). In this same questionnaire, parents were asked about their child's ancestry. Proactive recruitment of African Nova Scotian learners was supported by the Delmore "Buddy" Daye Learning Institute (DBDLI), Imhotep's Legacy Academy, Dr. Patrick Kakembo, and the Halifax Regional Centre for Education (HRCE). Our collaboration with DBDLI is integral in identifying practices that support positive learning environments and opportunities for all students, including for students experiencing economic exclusion and African Nova Scotian students.

How does our research build on prior findings in this area?

Reading for understanding, or reading comprehension, is the foundational skill through which people acquire knowledge and engage with society. Adults must be able to understand what they read to make informed decisions about their health and their family's well-being — especially in critical situations like managing illnesses or following prescription instructions. In the workplace, both safety and success depend on the ability to follow written procedures and engage in ongoing, high-level learning. Reading comprehension also supports civic engagement; learning about and working

to address societal issues depends on the ability to learn through reading. In short, reading comprehension is the single most important skill that children acquire in elementary school — a skill that will enable, or challenge, their ability to fully participate and contribute as citizens throughout their lives.

Many children in Nova Scotia, like many places around the world, struggle with reading. Past provincial assessments have shown that nearly 30% of students in Grade 3 are not reaching grade-level expectations for reading comprehension (HRCE, 2016), and international data show that 1 in 5 teenagers (~15 years of age) struggle with reading comprehension (OECD, 2016). Educators and policy leaders are working to address this challenge, with IURN's work supporting efforts here in this province. In Nova Scotia, rates of reading difficulties are higher for students of Indigenous and African Nova Scotian descent and for children experiencing economic exclusion and poverty; here we identify opportunities to ensure that they succeed in learning essential reading skills for learning in the classroom and beyond. The goal of our project was to identify the language skills all children need to succeed in learning to read, with a particular focus on capturing this for African Nova Scotian children and those experiencing poverty in Nova Scotia. This is the core knowledge needed help every child succeed.

Our research builds on decades of evidence and theory pointing to the importance of oral language skills to successful literacy (e.g., Dickinson, Golinkoff, & Hirsh-Pasek, 2010; Nagy & Anderson, 1999; Snowling & Hulme, 2006). These ideas support the value of language-rich classroom instruction. They also resonate with Nova Scotian literacy curriculum, which embraces the fundamental relationship between oral language and reading skill.

We build on this base to identify the contributions of individual oral language skills

THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING

Language Comprehension
Background Knowledge
Vocabulary
Syntax
Morphology
Rhythm of language

Word Recognition
Phonological awareness
Decoding
Sight word

increasingly strategic

increasingly automatic

SKILLED READING:
Fluent execution and coordination of word recognition and text comprehension.

Adapted from Scarborough (2001)

to reading development and examine skills at the level of individual sounds, rhythm of language, sentences, and roots and affixes; these are known as phonological, prosodic, syntactic, and morphological skills, respectively. We think of these as individual strands of skills that are woven together into the strong oral language skills that support literacy development.
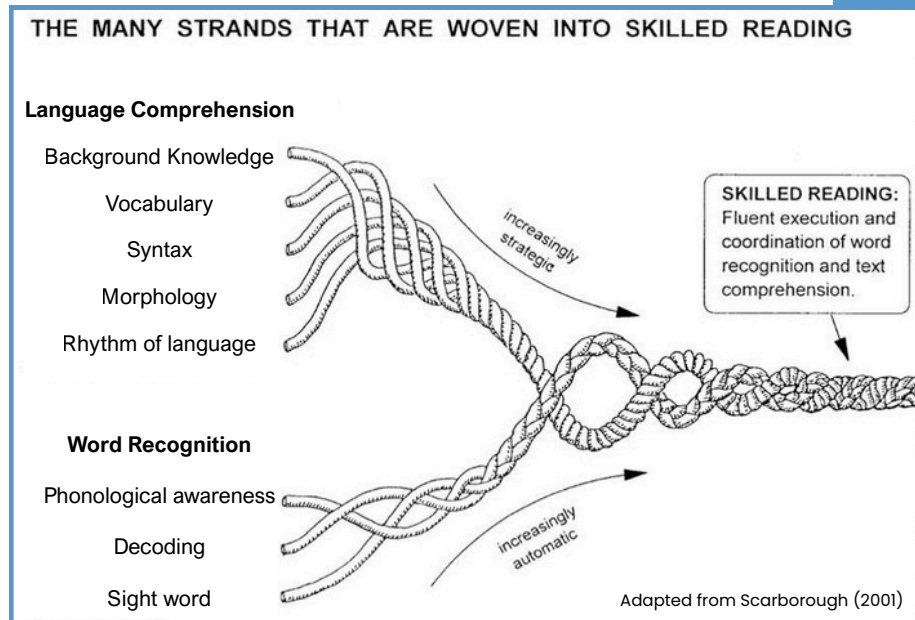
What Did We Do?

Recruitment

In 2019, the first year of this six-year longitudinal study, we recruited 337 children in Grade 1 across 18 elementary schools in two regional centre for education (i.e., Halifax and South Shore). This reflected a 46% response rate and a final sample size that exceeded our original target of 275. These outcomes also demonstrate strong community engagement and trust in both the project and our research team. Of the schools we worked in, two were considered 'priority' schools, with fewer available resources and with scores were often below provincial standards in literacy and mathematics (Bennett, 2019). Further, as mentioned above, the DBDLI and HRCE were both integral in supporting participation of African Nova Scotians in this project.

In Grade 1, we completed a series of language and literacy activities in schools with all 337 participants between January and June of 2019. Data collection in Grade 2 ended prematurely due to the COVID-related school closures, which also prevented data collection from taking place in Grade 3. We were then able to work with the children again in each of Grades 4 to 6.

In Grade 6, there were a total of 231 children remaining in the study. We retained nearly 70% of the original group of children, a high retention rate given the duration of the study. We also received guardian consent to obtain provincial assessment data for 217 of these participants. We are grateful to the Department of Education and Early Childhood Development for enabling our access to these data.

Participant demographics

As part of our consent process, we included a questionnaire that asked parents about their child's background, language history, and home literacy experiences. Almost all parents and guardians (i.e., 99%, 334 of 337) who consented for their child to participate returned this questionnaire. This allowed us to accurately describe our participants. We learned that they came from a wide range of language backgrounds, ancestries, and socioeconomic status. Parents reported that 85% of the participating children spoke English as their first language, with 23 other languages reported as first languages. A total of 28 children were reported to have a clinical diagnosis (e.g., ASD, ADHD, Anxiety, Speech delay). Table 1 presents the diverse range of ancestries represented in this study (reported by 288 of the 337 participants). We worked with all children for whom we had consent and all of our analyses

are conducted with all children who could complete the majority of the activities, to be as inclusive as possible.

Table 1. Reported Ancestry of Students by Grade.

Year	Grade 1	Grade 6
# Students Total	337	231
African, African Nova Scotian, or Indigenous Ancestry	32	15
European Ancestry	199	150
Other Ancestry (Hispanic, Middle Eastern, Acadian, Asian, East Asian)	73	37
# Students for whom we do not have Ancestry Information	49	37

Note: 14 parents included multiple Ancestries (up to 3) for their children; this table reflects those multiple responses.

Generalizability of sample

It was important to us that the data that we report on is representative of the full range of typical development. Beyond examining ancestry and socioeconomic background, another way to explore this is to compare average levels of performance on tests for our sample to the standardization sample. This was possible for the activities we used that are standardized measures. Often, reading research oversamples 'good readers' because these are the children whose parents think they will be interested in studies of reading and so results are not applicable to typical children in typical classrooms. We were pleased to see that average levels of performance of our participants were quite similar to those in the standardization samples. In Grade 1, children's scores were close to average across each standardized task. For example, average performance for vocabulary (PPVT-5; Dunn, 2018), word reading (Sight Word Efficiency from TOWRE-2; Torgesen, Wagner, & Rashotte, 2012), and reading comprehension (Passage Comprehension from WRMT-III; Woodcock, 2011) was from 104 to 106 — just slightly above the standardized average score of 100 indicated in the test manuals. The range was also close to that in the manual, with standard deviations for these measures from 13 to 15, close to or at the 15 reported in the test manuals. Overall, these averages and ranges on standardized measures suggests that the children in our sample were developing typically and that results are likely generalizable to the broad range of children found in Nova Scotia classrooms.

What Did We Find?

We analyzed the data by examining how each oral language skill measured in Grade 1 related to children's levels of word reading and reading comprehension, after a set of controls. Word reading reflects the ability to read individual words presented on their own, and reading comprehension refers to the ability to understand whole texts. Both skills were measured with well-established standardized tests appropriate for this age group. We also report on analyses with the provincial literacy assessment data for a subset of children (n = 217); these data are only available at Grade 6, as the provincial assessment was not administered when these children were in Grade 3. These analyses establish how these oral language skills apply to reading skills identified as important by teachers here in Nova Scotia.

Specifically, we looked at the contribution of oral language skills at several levels: phonological awareness, and awareness of rhythm of language, sentences, and roots and affixes. Our goal was to determine whether, and to what extent, each of these components of oral language influences reading outcomes. If so, they could represent valuable targets for instructional focus.

We first report on analyses for the group as a whole, and then for specific subgroups that are a focus for IURN.

Analyses on the group as a whole

Our analyses included controls for vocabulary, nonverbal reasoning, and socioeconomic status (SES). Including these factors as controls in analyses means that identified contributions are unlikely accounted for by these other factors. We calculated SES using the well-established Hollingshead (1975) four-factor index. This incorporates parents' education, occupation, and marital status, providing a broad representation of family background. Including these control variables also helped us confirm the generalizability of our findings across children from a wide range of backgrounds. The inclusion of these controls also explains why some of the contributions of specific oral language skills appear relatively small; all contributions reported below are remarkable given that they emerge after the substantive contributions of these control variables.

Table 2 shows the unique contributions of each of the measured oral language skills on Grade 1 and 6 levels of word reading (middle columns),

reading comprehension (further right) and provincial literacy assessment (far right). As noted above, these contributions are after substantive control measures.

Table 2. Results of linear regression analyses showing the percentage of variance that each oral language skill contributes to each reading measure at Grades 1 and 6, after accounting for Grade 1 vocabulary, nonverbal reasoning, and SES.

	Word Reading		Reading Comprehension		Provincial Literacy Assessment
Grade 1 Skills	**Grade 1**	**Grade 6**	**Grade 1**	**Grade 6**	**Grade 6**
Phonological Awareness	14%	4%	12%	7%	8%
Rhythm of Language	9%	4%	7%	10%	10%
Sentences	3%	5%	3%	8%	9%
Roots and Affixes	2%	3%	2%	11%	8%

These results suggest that:

- Each of these oral language skills offers a unique contribution to all measures of reading outcomes in both Grades 1 and 6. These findings suggest that each plays a role in both reading words and in understanding what is being read.

- Contributions of each oral language skill to reading are similar in size for the standardized measures of reading and the provincial literacy assessment.

- Of the oral language skills, the contributions of phonological awareness are almost universally the largest to all reading measures at both Grade 1 and 6. Early phonological awareness skills make strong contributions to long-term levels of skill in reading individual words and in understanding whole texts.

- Contributions of each of the oral language skills to reading comprehension increase in size from Grades 1 to 6, showing that these foundational oral language skills support reading development through the elementary school years.

- Importantly, all these results emerge after the variance associated with socioeconomic background, so results likely apply across children from a range of backgrounds

Students experiencing economic exclusion and poverty

In line with IURN mandate, we explored whether the same pattern of results emerged for children experiencing economic exclusion and poverty. To examine the effect of economic exclusion and poverty, for all outcomes, we conducted analyses contrasting results from the sample of students in the bottom quartile of our SES measure to those in the upper 75% . The pattern of results shown in Table 2 was not significantly different for these two groups for the standardized assessments. However, there were significant differences in the patterns based on SES for the Grade 6 provincial literacy assessment (shown in far right of Table 2). As a result, we reconducted the analyses for each oral language skill with each group separately for the Grade 6 provincial literacy assessment. These results are shown in Table 3.

Table 3. Results of linear regression analyses showing the percentage of variance that each oral language skill contributes to performance on the provincial literacy assessment for each SES group, after accounting for Grade 1 vocabulary, nonverbal reasoning, and SES.

Grade 1 Skills	Grade 6 Provincial Literacy Assessment	
	Low SES	Mid and High SES
Phonological Awareness	24%	5%
Rhythm of Language	20%	9%
Sentences	13%	8%
Roots and Affixes	15%	7%

The results show that each oral language skill contributes much more strongly to performance on the provincial literacy assessment for children experiencing economic exclusion and poverty than for their socioeconomically advantaged peers. In fact, these contributions are two to four times greater for children facing economic exclusion and poverty. The difference is most prominent for phonological awareness, followed by rhythm of language. These findings suggest that boosting phonological awareness skills through instruction (along with the other oral language skills) is likely to lead to the greatest improvements in reading skills for children experiencing economic exclusion and poverty.

African Nova Scotian Research Spotlight

Our collaboration with the Delmore "Buddy" Daye Learning Institute brought the first large-scale, population-representative data for African Nova Scotians throughout elementary school years. The value of this dataset is at least two-fold. On the one hand, our collaboration enabled equitable and inclusive participation of African Nova Scota communities in research and, on the other hand, this active involvement brought community-based expertise into our project, ensuring that our findings are grounded by local voices.

Adena Cox completed a Master's thesis in School Psychology that focused on children in the sample who identify as African Nova Scotian. Dr. George Frempong (from DBDLI) served on her committee to support this work. The analysis focused on the Grade 1 data and revealed that, when considered together, students of African descent and those identifying as African Nova Scotian had lower scores on word reading and several oral language skills (including phonological awareness) compared to a sample of other Nova Scotian students. Homing in on African Nova Scotian students in particular, Cox's analyses showed that African Nova Scotian (ANS) students scored lower than students of African descent (not ANS) on several skills, including word reading and certain oral language skills. These findings highlight opportunity gaps experienced by students of African descent broadly, and by African Nova Scotian students in particular. The full analyses and findings are reported in detail in Cox's Master's thesis, which also includes an excellent review of the educational experiences of African Nova Scotians: hdl.handle.net/10587/2185

Addressing the mandate of IURN to embrace intersectionality, follow-up analyses by the team at DBDLI, led by Dr. George Frempong, described the intersectionality between race, gender, and social class in these findings. These were presented in a collaborative webinar led by Dr. Frempong and Dr. Deacon to the IURN team in January of 2022. We are working with DBDLI to conduct and communicate further analyses based on the full dataset.

Moving Forward and Recommendations

How can this research be used?

The results of this study give insights into how we can better support students who face systemic inequalities resulting in unequal access to learning opportunities, achievement, and benefits. It is well-established that it is critical to support oral language in the classroom. Our work builds on this by examining the contribution of different aspects of oral language in Grade 1 to literacy skills in Grades 1 through 6. Our findings revealed children's phonological awareness, and awareness of rhythm of language, sentences, and roots and affixes contribute to word reading and to reading comprehension in Grade 6.

Our data clearly show that phonological awareness plays the largest role in children's reading development, across both standardized measures and those from the provincial assessment. And yet, there are roles for each of the other language skills, from roots and affixes to rhythm and sentence structure. These findings encourage us to consider instruction that leverages each of these skills, which could in turn support reading development. Our analyses suggest that such instruction could be beneficial for children from a range of backgrounds and would be most important for children experiencing social exclusion and poverty. We have appended ideas for instruction in each of these areas: phonological awareness, and awareness of rhythm of language, sentences, and roots and affixes.

Instructional Ideas Based on Findings

Our findings show that children's awareness of individual sounds, rhythm of language, sentences, and roots and affixes are all related to their reading skills. Providing targeted instruction on these skills might further contribute to reading skill development, and there are many ways to teach children about them! Here, you will find activity examples and further resources.

More resources are also available on our website:
langlabatdal.weebly.com.

Phonological awareness:
Individual sounds in spoken language

Phonological Awareness refers to a child's ability to recognize and manipulate sounds in spoken language. Instruction in phonological awareness is now included in the Nova Scotia curriculum.

Clapping Game

To help children separate syllables, have them clap after each syllable of a word. Alternatively, children could tell you when to clap!

Syllable Tokens

Ask children to place one token for each syllable of a word written on the board.

Sound Deleting

To have children manipulate sounds (phonemes), have them remove certain sounds of words. For example, "say boat without /b/".

Resources for teachers and educators

The Nova Scotia Curriculum | curriculum.novascotia.ca/updated-p-2-language-arts-curriculum-and-resources

University of Florida Literacy Institute (UFLI) | ufli.education.ufl.edu/
- PowerPoint and text on phonology instruction.

Florida Center for Reading Research | fcrr.org/student-center-activities
- Phonology activities for students at each grade level (under FCRR student activities).

Hertfordshire University Phonological Games | www.hertfordshire.gov.uk/microsites/local-offer/media-library/documents/resource-area-documents/spld-phonological-skills-games-to-play.pdf
- A pdf document that lists many phonological games for children.

Prosody: Rhythm of language

Prosodic sensitivity refers to awareness of speech rhythm, which includes patterns of sounds within and across words and phrases, as well as changes in voice pitch. Changes in prosody impact word meaning and text understanding. For instance, emphasizing different parts of the word 'record' changes its meaning drastically: either a noun referring to a vinyl disc or a verb referring to the act of recording sound.

Speech Rhythm

Teachers can model and repeat good speech rhythm during reading by reading with proper tone and rhythm, emphasizing appropriate sounds in words and sentence pitch. This can also be accomplished with audio recordings, as children listen along to the recording.

Repeated Reading

To improve their rhythm and prosody, children can engage in "echo reading"; the teacher models the speech rhythm of a sentence and then the child 'echos' the teacher's reading. Repeated reading can also be done independently, with students re-reading the same passage multiple times. This can help children learn what appropriate prosody sounds like.

Resources for teachers and educators

Florida Center for Reading Research | fcrr.org/student-center-activities
- Activities divided by grade level and target of instruction. Use the search tool to find prosody activities.

The Dyslexia Classroom | thedyslexiaclassroom.com/blog/the-rhythm-of-english-and-its-impact-on-instruction
- Explains syllable stress and provides instruction ideas.

ELT Planning Word Stress | eltplanning.com/2016/09/15/word-stress/
- Various 'go to' activities for practicing word stress.

Carnegie Learning | carnegielearning.com/blog/build-prosody-for-strong-oral-reading-fluency
- Explains the importance of prosody and suggests classroom activities.

Syntax: Sentence structure

Syntax refers to the way in which words and phrases are organized into sentences. **Syntactic skills** refer to the ability to understand and use this structure.

Sentence Types

Children can be taught about different sentence types (for example, active versus passive sentences) with the task of finding examples of these different kinds of sentences in their text.

Identifying Sentence Components

Children can identify the 'doer' in a sentence in order to identify the subject of the sentence. Similarly, identify 'extra information' in a sentence and find the 'main idea', which is the subject and object.

Breaking Down or Building Up Sentences

Children can practice breaking sentences into different parts (phrases), or combine single simpler sentences into more complex sentences. This can be done by having children first describe a picture or a story with simple sentences, and then combine the sentences into one complex sentence afterwards.

Altering Sentences

Children can practice changing one sentence type into another, such as converting a statement into a question

Increase Sentence Complexity

To practice building more complex sentences, children can ask 'w' questions (e.g., who, what, when, where, why) about an interesting picture.

Resources for teachers and educators

The Syntax Project | thesyntaxproject2022.squarespace.com/
- Resources and lessons to help teach students syntax, free of charge.

Reading Rockets | readingrockets.org/
- Summary of recent research and instruction ideas for syntax.

Busy Teacher | m.busyteacher.org/3687-how-to-teach-word-order.html
- Guidance for teaching word order in the classroom.

Morphology: Roots and affixes

Morphology refers to children's awareness of the smallest units of meaning in language, such as roots, prefixes, and suffixes.

Word Breakdown

To help children learn about both word meaning and spelling, words can be broken down into roots and suffixes.
- For younger children, this can be done with more transparent word parts, such as those in compound words (e.g., airplane) as well as familiar roots and affixes that appear frequently in speech and text (e.g., jumping = jump + ing).
- Older children can be encouraged to do so with academic vocabulary, words such as *assessment* and *economic.*

Affix of the Week

Each week, children can be introduced a particular prefix or suffix to focus on during their reading. Once they identify these, children can practice 'taking off' this affix from the larger word to identify the root word.

Word Detectives

Older children can be taught to use roots and affixes as a problem-solving strategy to understand the meaning of an unfamiliar word. For example, they can work out why breakfast is made up of these two parts (break + fast). This approach can be useful for new words that children encounter for the first time.

Resources for teachers and educators

Morphology Matters | wvced.com/wp-content/uploads/2022/03/Morphology-Matters-April-2019.pdf
- An overview of morphology instruction.

Resources on Individual Morphemes | prefixsuffix.com/rootchart.php; affixes.org/
- Definitions of individual morphemes (e.g., roots and affixes) — because these are not always obvious even to adults!

Florida Center for Reading Research | fcrr.org/student-center-activities
- Activities divided by grade level and target of instruction (search *morphology*).

Thank You!

Our team would like to express our appreciation to the participants of this study who dedicated their time and energy to this research. We would also like to thank parents, teachers, principals, and school staff. Their extended commitment over the years played a critical role in enabling us to identifying factors to ensure the development of strong reading comprehension skills for elementary children, for students facing systemic inequalities resulting in unequal access to learning opportunities, as well as for the wider Nova Scotian student population. This research could not have been possible without the participation of each and every one of you.

We extend our gratitude to our lab members, collaborators, the Delmore "Buddy" Daye Learning Institute, the Department of Psychology and Neuroscience at Dalhousie University, and the Halifax Regional and South Shore Centres for Education. Our team brought together diverse expertise in developmental psychology, community, and linguistics, allowing us to draw on local and diverse knowledge through a strong partnered approach. Their unwavering commitment to this work kept the goal of supporting strong literacy achievement for all Nova Scotians, especially those from African Nova Scotia backgrounds and those experiencing economic exclusion, at the center of this work at every phase of the project.

Lastly, we would like to thank IURN and Nova Scotia Department of Education and Early Childhood Development for their support in conducting and sharing our research. And we would like to thank the Social Sciences and Humanities Research Council (SSHRC) and the Natural Sciences and Engineering Research Council of Canada (NSERC) for their extended help in making this research possible.

WANT TO HEAR MORE ABOUT OUR WORK?

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