

Exploring Associations between Alphasyllabic Phonological Awareness and Foundational Hindi Reading Skills

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Background

- The pivotal role of phonemic awareness in reading acquisition has been well documented in alphabetic languages, but research is sparse when it comes to alpha-syllabaries such as Hindi.
- ‘Two paths postulate’ : syllabic path’ (learning whole syllables) or an ‘alpha-syllabic path’ (learning syllables + phonemes) towards akshara knowledge and word reading.
- Phoneme level markers are less prominent in alpha-syllabaries as compared with alphabets, but focusing only on syllables is creating a cognitive overload for students
- *Purpose*: understand the relationship between Alpha-Syllabic Phonological Awareness (ASPA) and foundational reading skills such as Word Reading Efficiency (WRE) and Oral Reading Rate/Accuracy (ORR).

Results

Correlations

- We found moderate to high correlations between ASPA and WRE across the board. The correlation coefficients were as follows: (a) all readers (n=276): $r=0.82$, $p<0.001$; (b) readers in Grade 3-5 (n=103): $r=0.80$, $p<0.001$; (c) readers in grades 6-8 (n=113): $r=0.73$, $p<0.001$, and (d) readers in grades 9 and up (n=56): $r=0.60$, $p<0.001$.
- We found moderate to high correlations between the ASPA and ORF across the board. The correlation coefficients were as follows: (a) readers in Grade 3-5 (n=103): $r=0.80$, $p<0.001$; (c) readers in grades 6-8 (n=113): $r=0.70$, $p<0.001$, and (d) readers in grades 9 and up (n=56): $r=0.60$, $p<0.001$.

Regressions

- The number of skilled readers who relied on syllabic awareness alone is extremely small, if any of these readers exist at all. The ‘syllable path’ alone does not appear to lead to skilled, fluent reading.
- Poor readers tended to have the weakest phonological awareness. Among these readers, syllable level skills significantly predicted inter-group differences, while neither grade level nor other types of phonological awareness predicted reading efficiency.

Methods

Setting

- Three libraries in New Delhi, with a total membership of approximately 12,000 members
- Annual universal screener

Participants

- 276 students, ages 6-30 years, with education levels ranging from Grade 2 to university
- 80% of our school age members attend government schools or non-profit government aided schools
- 100% attend Hindi-medium schools and are from low SES backgrounds

Measures

- Alpha-Syllabic Awareness Probe-Hindi (ASAP-H)
- Word Reading Efficiency Probe-Hindi (WREP-H)
- Passages from Eklavya Foundation's grade level textbooks (ORF)

Research Questions

1. Is there a relationship between alpha-syllabic phonological awareness and word reading efficiency in Hindi across three groups of Grades 3-5, Grades 6-8 and Grade 9 and up?
2. Is there a relationship between alpha-syllabic phonological awareness and oral reading rate and accuracy in Hindi across three groups of Grades 3-5, Grades 6-8 and Grade 9 and up?
3. What paths of reading (syllabic vs. alpha-syllabic or both) did readers rely on based on their reading proficiency?

Discussion

- Phonemic awareness skills measured by the ASAP-H, are key contributors to WRE and ORR.
- Syllabic awareness alone does not appear to result in efficient word reading skills, but it likely plays an important early role as students learn to accurately decode words.
- Age of acquisition and proficiency matters:
 - The median reader in our Grades 3-5 sample demonstrated little, if any, phonemic awareness; they were thinking primarily in syllables. The shift to alpha-syllabic (phoneme + syllables) access happens in older readers (Grades 9+).
 - Similarly, the access to alpha-syllabic path is more prominent in proficient readers compared to struggling readers.
- Implications for teaching practices