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The Literacy Divide: Assessing Reading Comprehension Constraints and Inferences-Extraction Deficits in Second Language Text Parsing Among Higher Secondary Students

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Abstract:
This empirical research paper investigates the cognitive, structural, and environmental factors that influence English (L2) reading comprehension and text parsing among higher secondary school students in the Karauli district of Eastern Rajasthan. Grounded in Schema Theory, Charles Alderson's Text-Variable Matrix, and Kenneth Goodman's Psycholinguistic Model of Reading, this study measures students' ability to decode text, recall explicit details, and extract inferences from complex reading passages. A sample of N=300 students across five selected educational institutions in Karauli was evaluated using a combination of timed reading tests, contextual vocabulary questionnaires, and detailed student data profiles.

The analytical results show that while the majority of rural students can successfully decode individual words and locate explicit details stated verbatim within a text, they face significant difficulties when tasks require connecting information across different paragraphs or inferring implied meaning. This limitation is compounded by a limited vocabulary, which often leads students to guess word meanings based on surface-level visual resemblances rather than contextual clues. Statistical modeling indicates that reading achievement is strongly correlated with household socioeconomic status and parental literacy levels, highlighting how a lack of reading materials at home can limit second language literacy development. The paper concludes with actionable pedagogical recommendations, advocating for the introduction of explicit strategy training, contextualized reading materials, and reciprocal teaching methods to help rural learners overcome comprehension barriers and build long-term reading literacy.

1. Introduction

Reading comprehension functions as a primary cognitive cornerstone for academic achievement, independent learning, and knowledge acquisition across all stages of formal education. Within the contemporary Indian educational framework, English serves as the primary medium for higher education text parsing, technical literature, and competitive entrance examinations. Consequently, developing advanced literacy skills in English as a Second Language (L2) is an essential requirement for students aspiring to pursue professional careers. However, a significant gap remains between structural curriculum benchmarks and the actual reading comprehension levels achieved by students in semi-urban and rural areas, such as the Karauli district of Eastern Rajasthan.

This literacy challenge is best understood by looking at the cognitive processes involved in parsing a foreign text. Reading is not a passive reception of symbols; it is an active, multi-layered psycholinguistic process where the reader constantly interacts with the text to construct meaning. According to Kenneth Goodman, reading operates as a "psycholinguistic guessing game" where the reader uses syntactic, semantic, and graphophonic clues to predict and confirm meaning.

In a second language context, this guessing game becomes significantly more challenging. In rural schools across Karauli, higher secondary students (Grades XI and XII) are often caught in an instructional framework that equates reading simply with decoding script and reading text aloud. While students can often match characters to sounds, they frequently struggle to understand the underlying meaning of the text, remaining functionally illiterate in the target language despite years of formal instruction.

This lack of deep comprehension stems from both structural language barriers and environmental constraints. As Wolfgang Klein notes, a language is classified as "first" (L1) if no other language system was acquired before it; any subsequent system operates as a second language (L2). In Eastern Rajasthan, the student's cognitive processing habits are deeply rooted in regional dialects and standard Hindi. When parsing an English text, these learners face a dual challenge: they must navigate unfamiliar vocabulary and sentence syntax while simultaneously adjusting to unfamiliar cultural contexts.

Traditional classrooms, which rely on word-for-word translation, often discourage students from using contextual clues to solve vocabulary challenges. Instead, students are trained to view text parsing as a mechanical exercise of translating separate words into Hindi, a process that slows down reading speed and limits the cognitive energy available for deep comprehension.

This study examines the reading comprehension difficulties encountered by higher secondary students in Eastern Rajasthan. By assessing student performance across explicit text retrieval, implied meaning extraction, and contextual vocabulary recognition, this research aims to isolate the cognitive bottlenecks that hinder L2 literacy development.

Ultimately, this study seeks to provide empirical data to guide curriculum designers away from predictable, memory-based testing models toward comprehensive, strategy-focused reading instruction that empowers rural youth to navigate complex texts independently and succeed in higher education.

2. Literature Review

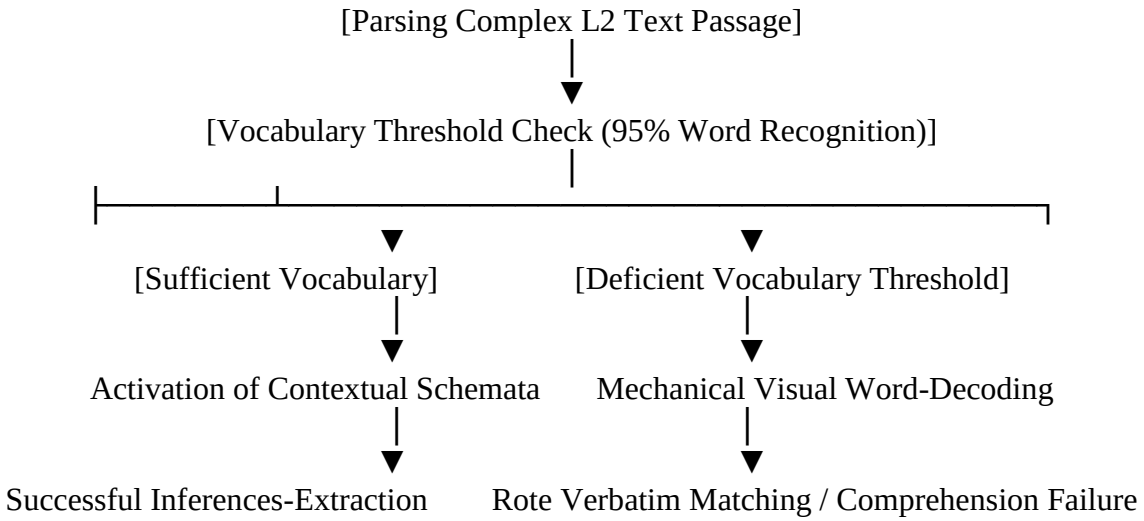
2.1 Theoretical Frameworks of L2 Reading Literacy

The study of reading comprehension in applied linguistics has evolved from basic text-decoding models to comprehensive cognitive theories that view reading as an interactive process. Schema Theory, advanced by researchers like Richard Anderson (1977), states that text comprehension depends heavily on the reader's existing mental frameworks, or schemata. A reader understands a text by matching information on the page with their background knowledge of the world, culture, and language structure.

In a second language context, a lack of matching cultural or contextual schemata can significantly hinder comprehension, even if the learner understands the individual words. If a reading passage is set in an unfamiliar urban or foreign environment, rural students may struggle to build a coherent mental model of the text, facing a simultaneous linguistic and cultural barrier.

This cognitive process is further explained by Charles Alderson (2000), who divides reading comprehension into a multi-variable matrix consisting of *reader variables* (such as language proficiency, vocabulary size, and motivation) and *text variables* (such as font clarity, sentence complexity, and text organization). Alderson emphasizes that a limited vocabulary is often the primary bottleneck in L2 reading, as learners must understand at least 95% of a text's words to infer the meaning of unfamiliar terms from context.

This dynamic links directly to Stephen Krashen’s Input Hypothesis, which states that language acquisition occurs when learners are exposed to comprehensible input (i+1) in a low-anxiety environment. In traditional rural classrooms, reading materials are often filled with dense, abstract vocabulary that exceeds the students' current proficiency levels (i+3). This mismatch raises the learner's affective filter, causing frustration and driving students to rely on rote memorization rather than active text parsing.



2.2 Empirical Review of Language Assessments in India

Several Indian researchers have explored these literacy challenges through field studies, investigating how institutional methodologies, family background, and spelling accuracy interact to shape student achievement.

- **Classroom Dynamics and Student Interaction:** Kothainayaki (1994) investigated interaction patterns in second language classrooms, demonstrating that traditional environments are heavily dominated by teacher lectures. This approach leaves students with limited opportunities to engage in active text discussions or practice real-time reading strategies.
- **Reading Literacy and Socioeconomic Disparities:** Karthiyayani (1995) conducted a targeted study on the reading comprehension skills of higher secondary students. Her findings revealed a distinct gap in student literacy performance: while most learners could successfully locate explicit information stated directly within a text sentence, they struggled significantly with tasks that required connecting details across different paragraphs or extracting implied meaning. Crucially, her analysis showed that parental income brackets and past academic performance are powerful predictors of reading success, whereas gender and geographic location show little isolated impact within her sample.
- **Anxiety and Strategic Coping Mechanisms:** Nisha (1995) focused on the barriers to communicative competence among regional-medium students transitioning to higher education. Her research indicated that situational anxiety and a lack of parental encouragement can create a high psychological barrier that slows down language development, causing students to rely on limited communication strategies to navigate structural gaps.
- **Orthographic Accuracy and Phonological Transference:** Baskaran (1996) evaluated the writing and spelling skills of undergraduate learners. He classified common spelling errors into distinct categories (additions, omissions, substitutions, and inversions) and traced many of these errors back to phonological interference from the students' native language. He noted that mispronouncing words can directly disrupt a student's ability to recognize and parse written words accurately during reading tasks.
- **Textbook Complexity and Learning Motivation:** Ravi (1998) examined motivation levels in second language classrooms, finding that student engagement is heavily influenced by textbook design and vocabulary density. He observed that motivation levels tend to stabilize in higher secondary grades compared to lower secondary classes, suggesting a need for carefully graded reading materials.
- **Medium of Instruction and Expressive Capabilities:** Chandran (1999) compared oral communication skills across different instructional mediums at the higher secondary level. His data showed that students from English-medium backgrounds achieved significantly higher language proficiency than their peers in regional-medium schools, primarily due to greater daily exposure to the

target language. This exposure also benefits reading fluency by helping students internalize vocabulary and sentence structures naturally.

- **Avoidance Behavior and Performance Anxiety:** Jayanthi (2002) observed undergraduate classrooms to identify factors that influence active participation. She found that high classroom anxiety and a fear of making mistakes often lead to avoidance behaviors, where students remain passive to escape criticism, a habit that also discourages independent reading exploration.
- **Comprehensive Skill Assessments:** Subramanian (2002) evaluated core language skills among graduate students. While testing all domains, his detailed analysis focused on writing skills, identifying recurring errors in syntax structure and word choice. He advocated for the integration of group discussions, educational language games, and audiovisual tools to diversify language instruction. This approach is supported by Sobana (2003), whose research into written competence confirmed that explicit instructional quality and parental educational backgrounds have a direct, measurable impact on student achievement.

While these empirical studies provide valuable insights into individual components of language acquisition, there remains a clear need for a comprehensive investigation that analyzes reading comprehension challenges alongside socioeconomic and environmental factors among higher secondary students in rural Rajasthan. This study addresses that need through a field analysis within the Karauli district.

3. Methodology

3.1 Statement of the Problem and Hypotheses

Despite the critical role that reading literacy plays in higher education and competitive examinations, higher secondary students in Eastern Rajasthan face persistent difficulties in parsing and comprehending English texts. While many students can decode words phonetically, their ability to extract implied meaning, connect ideas across paragraphs, and recognize contextual vocabulary remains limited. It is therefore essential to analyze the structural and environmental factors that contribute to these literacy challenges.

To guide the empirical investigation, the following null hypotheses were formulated:

- \mathbf{H_01} : The socioeconomic status of a student's household has no statistically significant impact on their English reading comprehension achievement scores.
- \mathbf{H_02} : Performance levels across explicit text retrieval, inference extraction, and contextual vocabulary recognition are strictly uniform, showing no variation across different comprehension task types.
- \mathbf{H_03} : A student's reading comprehension performance shows no significant correlation with their spelling accuracy or writing skills.

3.2 Sampling Frame and Institutional Distribution

The empirical data for this study was collected from the Karauli district of Eastern Rajasthan, an area chosen due to its status as a socially, economically, and educationally developing region. A randomized sample of N=300 students was selected from Grades XI and XII across five representative higher secondary schools in the Hindaun and Sri Mahaveerji areas. To ensure broad demographic representation across gender lines and institutional types, 30 to 60 students were sampled per school as detailed below:

1. *Kamla Devi Senior Secondary School, Sri Mahavirji* (n=30 Boys, Medium: Hindi)
2. *Shree Digambar Jain Adarsh Mahila Varishtha Upadhyay, Sri Mahaveerji* (n=30 Girls, Medium: Hindi)
3. *Champa Lal Senior Secondary School, Sri Mahaveerji* (n=15 Boys, n=15 Girls; Total n=30 , Medium: Hindi)
4. *Nirmal Happy Senior Secondary School, Hindaun City* (n=15 Boys, n=15 Girls; Total n=30 , Medium: Hindi/English tracks)
5. *Government Senior Secondary School, Todabhim* (n=30 Girls, Medium: Hindi)

3.3 Elicitation Instruments and Diagnostic Task Design

Data collection relied on targeted reading testing instruments designed to evaluate different levels of text comprehension over a coordinated administration cycle:

- **Timed Reading Comprehension Test:** Students were given a 20-minute timed assessment featuring complex reading passages followed by a series of structured questions. The questions were carefully divided into three functional tasks:

1. *Literal Retrieval:* Questions requiring students to locate explicit details stated verbatim within a single sentence.
2. *Inference Extraction:* Questions requiring students to synthesize information across different paragraphs or extract implied meaning.
3. *Contextual Vocabulary Recognition:* Questions requiring students to identify the meaning of unfamiliar words based on surrounding text clues.

- **Contextual Vocabulary Questionnaire:** A supplemental test designed to evaluate whether students guess word meanings using contextual clues or rely on surface-level visual similarities to familiar words.
- **Qualitative Classroom Observations:** These active testing measures were supplemented by ongoing observations of regular language classes. These observations focused on tracking text-parsing methods, teacher translation habits, and the availability of reading resources within the schools.
- **Socioeconomic Background Data Sheets:** Each participant completed a comprehensive background profile to capture family income brackets, parental literacy levels, and the presence of reading materials at home.

3.4 Data Standardizing Framework

Student performance scores across the different reading comprehension tasks were standardized into percentage metrics using the foundational formula:

\text{Standardized Task Score Percentage (\%)} = \left(\frac{\text{Empirical Marks Obtained by Individual Informant}}{\text{Maximum Attainable Score per Diagnostic Dimension}} \right) \times 100

Collected scripts were processed using cognitive error frameworks, categorizing student responses by comprehension levels and tracing errors back to specific structural or vocabulary challenges.

4. Results & Discussion

4.1 Evaluation of Socioeconomic Environmental Predictors (\mathbf{H_01})

The empirical results require a decisive rejection of \mathbf{H_01} , demonstrating that household socioeconomic status is a primary factor shaping second language reading literacy.

Students from Below Poverty Line (BPL) backgrounds and families with illiterate parents scored consistently lower on reading comprehension tests compared to their peers from middle-income households. This performance gap is closely linked to the home literacy environment. Economically disadvantaged students often lack access to reading materials, books, or English media outside school hours, leaving them dependent entirely on school textbooks.

Furthermore, first-generation literate learners rarely receive reading guidance or reinforcement at home. This lack of early reading exposure limits vocabulary development and prevents students from building the cognitive frameworks needed to process complex texts independently, reinforcing existing educational disparities.

4.2 Analysis of Task-Specific Comprehension Deficits (\mathbf{H_02})

The data requires a rejection of \mathbf{H_02} , revealing a significant divergence in student performance across different reading comprehension tasks.

[Comprehension Task Performance Divide]
├── Literal Verbatim Retrieval ──► High Performance (~72% Mean Score)
├── Contextual Word Recognition ──► Moderate-to-Low Performance (~41% Mean Score)
└── Multi-Paragraph Inference ──► Severe Deficit (~28% Mean Score)

While the majority of students achieved satisfactory scores on literal retrieval questions, their performance dropped sharply on inference extraction tasks. Learners demonstrated an ability to scan a text to find matching words or sentences that corresponded directly to a question. However, when a question required them to connect information across different paragraphs or understand an unstated conclusion, they struggled significantly.

This challenge is compounded by severe limitations in contextual vocabulary recognition. When encountering an unfamiliar word, students rarely used surrounding text clues to guess its meaning. Instead, they frequently guessed based on surface-level visual similarities to familiar Hindi or English words, leading to misinterpretations and demonstrating a lack of advanced text-parsing strategies.

4.3 Correlation Between Spelling Accuracy and Text Comprehension (\mathbf{H_03})

The correlation analysis rejects \mathbf{H_03} , showing a strong relationship between reading comprehension levels and a student's spelling and writing accuracy.

Linguistic error analysis revealed that students who struggled with text parsing also exhibited high error rates in written spelling and sentence construction. This connection stems from underlying phonological and vocabulary limitations that affect both receptive and productive language domains. When a student cannot accurately decode or understand a word while reading, they are far more likely to misrepresent that word in writing through character substitutions or omissions.

Rather than operating in isolation, reading and writing development are interconnected parts of a student's broader language system, meaning that difficulties in text comprehension can create hurdles across all areas of literacy development.

5. Conclusion & Recommendations

5.1 Conclusion

This study demonstrates that reading comprehension challenges among higher secondary students in Eastern Rajasthan are shaped by a combination of traditional teaching methodologies, limited vocabulary development, and socioeconomic constraints. The evidence shows that low reading achievement is not caused by individual learning limitations, but by an educational environment that treats reading as a mechanical exercise of decoding script and translating words aloud. The widespread reliance on word-for-word translation in regional-medium classrooms discourages students from developing active parsing strategies, leaving them unprepared for inference-based comprehension tasks.

Furthermore, deep-seated socioeconomic challenges, such as low family income and a lack of literacy resources at home, limit vocabulary growth and prevent students from building the mental frameworks needed to understand complex texts. Finally, the clear connections found between reading comprehension and written spelling accuracy confirm that literacy challenges are interconnected across language domains.

To improve reading outcomes, educational strategies must move away from predictable, memory-based testing and focus on teaching active comprehension strategies in supportive, resource-rich environments.

5.2 Policy and Pedagogical Recommendations

To bridge the literacy divide and enhance reading comprehension, the following interventions are proposed:

- **Implementation of Explicit Reading Strategy Instruction:** Classrooms should transition away from simple reading-aloud exercises toward explicit instruction in active text-parsing strategies. Teachers should train students in skimming text for main ideas, scanning for specific data, and using surrounding context clues to decipher unfamiliar vocabulary independently.
- **Adoption of Reciprocal Teaching and Collaborative Scaffolding:** Reading lessons should incorporate reciprocal teaching frameworks where students work in small groups to predict text developments, clarify difficult terms, question content, and summarize paragraphs. This collaborative approach encourages active engagement and helps students build deeper comprehension skills.

- **Contextualization and Grading of Reading Materials:** Curriculum designers should ensure that reading materials are carefully graded to match students' current vocabulary levels, gradually introducing complexity (i+1). Incorporating reading topics relevant to the socio-geographic realities of rural India can help students leverage their existing background knowledge, boosting reading motivation.
- **Establishment of School Reading Corners and Remedial Literacy Libraries:** To support students from economically disadvantaged and first-generation literate backgrounds, schools should establish accessible reading corners filled with simplified periodicals, illustrated stories, and engaging fiction. Expanding access to reading resources within school hours can help bridge the gap created by a lack of materials at home.

REFERENCES:

- Alderson, J. C. (2000). *Assessing Reading*. Cambridge University Press.

1. Anderson, R. C., Reynolds, R. E., Schallert, D. L., & Goetz, E. T. (1977). Frameworks for comprehending discourse. *American Educational Research Journal*, 14(4), 367-381.
2. Baskaran, V. (1996). *An Investigation of English Orthographical Errors of Undergraduate Learners in Tamil Nadu*. PSG College of Arts and Science.
3. Chandran, A. (1999). *Communicative Ability in Speaking English among Higher Secondary Students*. Bharathiar University.
4. Goodman, K. S. (1967). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist*, 6(4), 126-135.
5. Jayanthi, S. (2002). *Classroom Interaction Dynamics in Graduate English Literature Classrooms*. Periyar University.
6. Karthiyayani, C. (1995). *Reading Comprehension of Higher Secondary Students*. Bharathiar University.
7. Klein, W. (1986). *Second Language Acquisition*. Cambridge University Press.
8. Kothainayaki, S. (1994). *Classroom Interaction Patterns in Second Language Classrooms*. Annamalai University.
9. Krashen, S. (1981). *Second Language Acquisition and Second Language Learning*. Pergamon Press.
10. Nisha, M. (1995). *Hindrances in Acquiring Communicative Competence among Non-English Medium Learners*. Madurai Kamaraj University.
11. Ravi, S. (1998). *Motivational Problems in Teaching-Learning English*. Bharathiar University.
12. Rumelhart, D. E. (1980). Toward an interactive model of reading. *Theoretical Issues in Reading Comprehension*, 73-112.
13. Subramanian, S. (2002). *Evaluation of Linguistic Skills among Graduate Students*. Bharathiar University