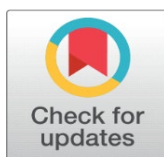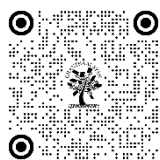# ENGLISH AS A SECOND LANGUAGE: A STATISTICAL ANALYSIS ON STUDENTS OF HIGHER SECONDARY GRADE

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ABSTRACT

English plays a critical role in education, career opportunities, and global communication. However, students in non-English-speaking environments, especially in regions like Bhopal, Madhya Pradesh, encounter significant challenges in learning English as a Second Language (ESL). This study aims to identify the difficulties faced by higher secondary students in acquiring English proficiency and to explore effective instructional strategies to improve ESL learning outcomes. Data were collected from 400 students (private and government schools) through structured tests and surveys. The study analyzed pronunciation errors, synonym and antonym recognition, abbreviation comprehension, and word meaning assessment to evaluate students' performance. The results revealed that government school students exhibited higher error percentages across all categories compared to private school students, indicating gaps in vocabulary retention, pronunciation accuracy, and word association skills. The findings suggest that a lack of exposure, ineffective teaching methodologies, socio-economic factors, and psychological barriers significantly hinder English learning.

Keywords: English, Pronunciation, Error, Higher Secondary, School, Student

1. INTRODUCTION

English has become a global language, playing a crucial role in education, business, and communication. In multilingual countries like India, it serves as a lingua franca, bridging communication gaps across diverse linguistic communities. However, English learning remains a significant challenge, particularly for students in non-English-speaking environments. In Bhopal, Madhya Pradesh, higher secondary students face several difficulties in acquiring English as a Second Language (ESL) due to limited exposure, inadequate teaching methodologies, and socio-economic constraints [1], [2].

The importance of English proficiency cannot be understated, as it directly influences academic success, career opportunities, and global competitiveness [3]. Despite India's inclusion of English in school curricula, ESL instruction is often ineffective due to overcrowded classrooms, lack of trained teachers, and reliance on rote memorization rather than communicative teaching [4]. Many students from Hindi-medium schools in Bhopal struggle with fluency, pronunciation, and comprehension, which hampers their ability to perform well in competitive exams and professional settings [5].

This study aims to identify key challenges faced by higher secondary students in Bhopal while learning ESL and to explore effective instructional strategies that can enhance English proficiency among learners. By focusing on pedagogical innovations, technology integration, and socio-cultural influences, this research seeks to provide practical recommendations for improving ESL education in Bhopal.

2. LITERATURE REVIEW
2.1 CHALLENGES IN ESL LEARNING
2.1.1 LIMITED EXPOSURE TO ENGLISH

One of the primary barriers to learning English for students in Bhopal is lack of exposure outside the classroom. Government schools primarily use Hindi as the medium of instruction, and students rarely interact in English outside academic settings [6]. According to a recent study, limited real-life practice in English significantly impacts language retention and fluency [7]. Socio-economic factors also contribute to this issue, as low-income families often lack access to English books, digital learning tools, and internet-based resources [8].

2.1.2 TEACHING METHODS AND CLASSROOM CHALLENGES

Most Indian schools, including those in Bhopal, still follow traditional teaching methods such as grammar-translation techniques and rote memorization, which emphasize passive learning rather than interactive communication [9]. This outdated approach results in students excelling in written exams but failing to develop practical speaking and listening skills. In contrast, Task-Based Learning (TBL) and Communicative Language Teaching (CLT), which encourage interactive learning, have been shown to significantly improve ESL acquisition [10]. However, these methods are underutilized in Indian schools due to high student-teacher ratios and lack of professional training for teachers [11].

2.1.3 NATIVE LANGUAGE INTERFERENCE

The structural and phonetic differences between Hindi and English cause several learning difficulties among ESL students. Research suggests that phonetic interference from Hindi leads to pronunciation errors, making English communication less intelligible [12]. Additionally, the direct translation of Hindi sentence structures into English results in grammatical inaccuracies that hinder fluency [13].

2.1.4 PSYCHOLOGICAL AND CULTURAL BARRIERS

Many Indian students experience "Foreign Language Anxiety" (FLA), which makes them hesitant to speak English due to fear of making mistakes and being judged [14]. This anxiety is particularly prevalent in traditional classroom settings, where students are discouraged from questioning authority or engaging in free discussions [15]. Furthermore, cultural expectations in India prioritize respect for teachers over active participation, which contrasts with Western ESL pedagogies that emphasize student engagement and interactive learning [16].

2.2 EFFECTIVE TEACHING STRATEGIES FOR ESL LEARNERS
2.2.1 COMMUNICATIVE LANGUAGE TEACHING (CLT)

Communicative Language Teaching (CLT) prioritizes real-life communication and interactive learning over rote memorization [17]. Studies have shown that CLT improves fluency, confidence, and comprehension by engaging students in role-plays, group discussions, and real-world scenarios [18]. Implementing CLT in Bhopal's classrooms can help students develop practical language skills instead of merely focusing on grammatical rules.

2.2.2 TASK-BASED LANGUAGE TEACHING (TBLT)

Task-Based Language Teaching (TBLT) involves students in problem-solving activities and collaborative projects, making language learning more meaningful and relevant [19]. Research indicates that TBLT encourages active participation and improves students' ability to use English spontaneously [20]. Schools in Bhopal could benefit from incorporating real-world tasks, such as writing emails or conducting interviews, into the curriculum.

2.2.3 TECHNOLOGY INTEGRATION IN ESL LEARNING

The use of digital tools in ESL education has proven highly effective. Mobile apps such as Duolingo and Babbel, online video content, and AI-based language tutors provide personalized learning experiences for students [21]. Studies have shown that interactive digital platforms improve retention and engagement, making language learning more accessible and effective [22]. In Bhopal, where resource constraints limit access to private tutoring, edtech solutions could serve as an affordable alternative for ESL improvement.

2.2.4 TEACHER TRAINING AND PROFESSIONAL DEVELOPMENT

Improving ESL instruction requires well-trained educators who understand modern teaching methodologies. Research emphasizes that teacher training programs focused on CLT, TBLT, and digital literacy can significantly enhance classroom engagement and student outcomes [23]. In India, however, many teachers lack access to ongoing professional development, limiting their ability to adopt innovative ESL teaching methods [24].

3. METHODOLOGY
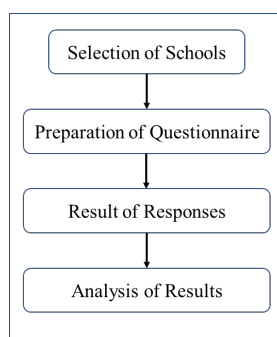
Figure 1. Methodology

Data was collected from 400 respondents (Private and Government School from Bhopal district). Objective of this study was to study the challenges encountered in learning english as a second language. A questionnaire was prepared to test the students of all schools. The methodology adopted to carry out the research work is shown in figure 1.

## 4. RESULTS AND DISCUSSION

4.1. TYPE OF SCHOOL

It was found that out of 400 students 49.2% of students were from Convent School and 50.8% of students were from Government School who were participated in the survey.

Table 1. Type of school

1. School Type	2. Frequency	3. Percent
4. Private School	5. 210	6. 52.5
7. Government School	8. 190	9. 47.5

4.2. PRONOUNCIATION AND SPELLING TEST OF SIMILAR WORDS

Figure 2 showed the test results for pronounciation of similar words. It was evidents from the results that a higher number of students committed blunders in words 'write', 'plane' and 'too'.
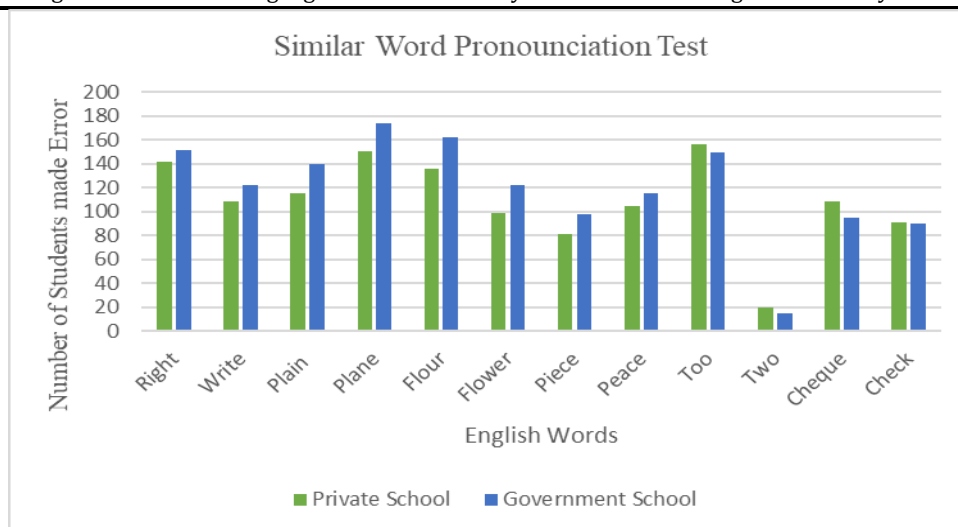
Figure 2. Pronounciation test results

Private school higher secondary students committed mistakes in those words with a percentage error of 51.9%, 71.9% and 74.29% respectively. While the percentage errors committed by government school students went by 54.21%, 91.58 and 78.95%.

4.3. SYNONYM TEST

Figure 3 showed the test results for synonym recognition, highlighting the percentage of errors committed by students from private and government schools. The results indicated that a higher number of errors were made by private school students in the word 'Advantage' with an error rate of 46.67%, whereas government school students showed a slightly higher mistake percentage of 57.89% for the same word. The highest percentage of errors among private school students was recorded for the word 'Decay' at 69.05%, while for government school students, the highest error rate was 81.58% for the same word. A noticeable trend was that government school students committed more errors across all categories compared to their private school counterparts, with significant differences in words like 'Merit' (71.58% vs. 53.33%) and 'Decay' (81.58% vs. 69.05%).
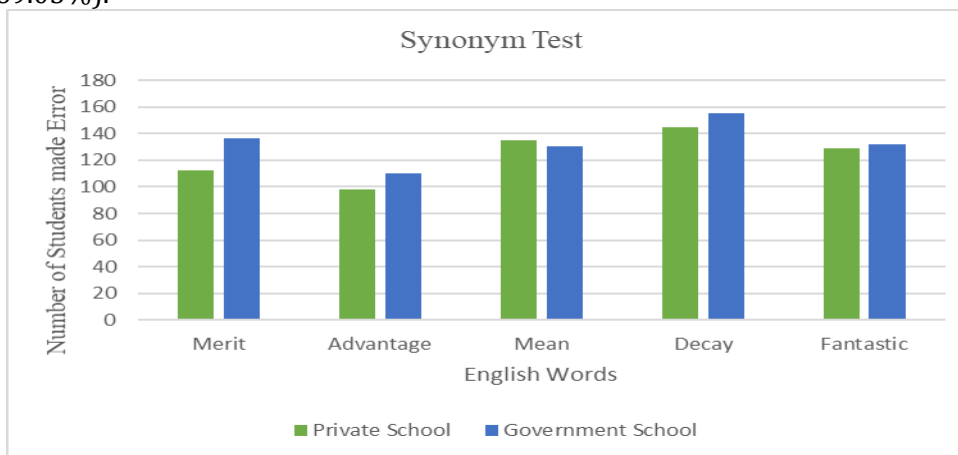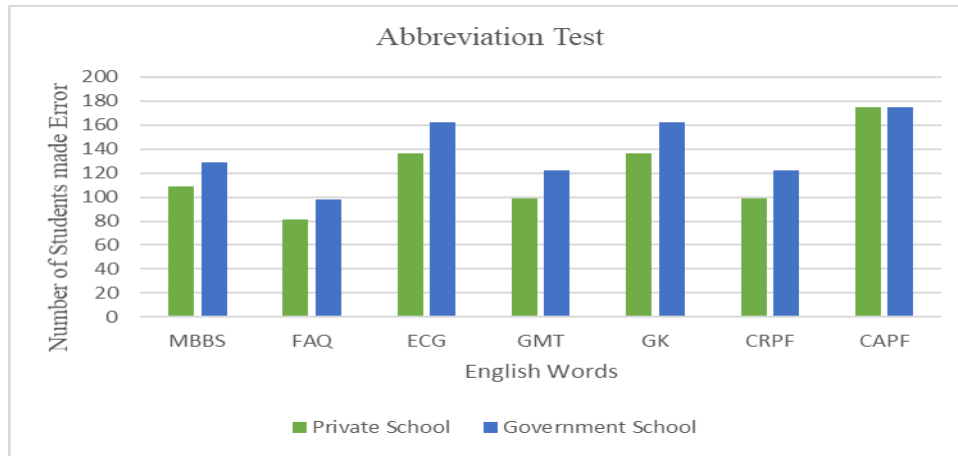

Figure 3. Synonym test results

4.4. ABBREVIATION TEST

Figure 4 showed the test results for abbreviation recognition, highlighting the percentage of errors made by private and government school students. The results revealed that private school students struggled the most with the abbreviation 'FAQ', committing an error rate of 38.57%, while government school students recorded an even higher error rate of 51.58% for the same abbreviation. The highest percentage of errors among private school students was observed for 'FAQ' (38.57%), whereas for government school students, it was 'MBBS' (67.89%). Among all abbreviations tested,
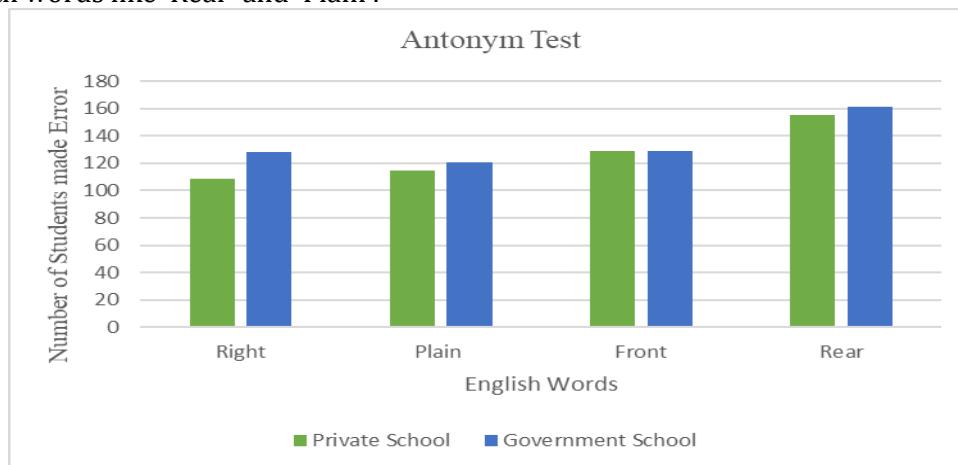
'CAPF' had the lowest error percentage, with private school students recording 83.33% and government school students 92.11%, indicating better recognition of this term. However, government school students committed significantly more errors across all categories, particularly in 'ECG' and 'GK', where their error rates were 85.26%, compared to 64.76% in private schools.

Figure 4. Abbreviation test results

4.5. ANTONYM TEST

Figure 5 showed the test results for antonym recognition, highlighting the percentage of errors made by private and government school students. The results revealed that government school students made more mistakes across all categories compared to private school students. The highest error percentage among private school students was observed for the word 'Rear' (73.81%), while for government school students, the highest was also 'Rear' (84.74%), indicating significant difficulty in recognizing its antonym. Among all words tested, 'Right' had the lowest error percentage, with private school students committing 51.90% errors, whereas government school students had a higher error rate of 67.37%. This suggests that students were relatively better at identifying antonyms for 'Right' but faced greater difficulty with words like 'Rear' and 'Plain'.

Figure 5. Antonym test results

4.6. WORD MEANING TEST

Figure 6 showed the test results for word meaning recognition, highlighting the percentage of errors committed by private and government school students. The results revealed that government school students struggled more across all categories compared to private school students. The highest error percentage among private school students was observed for the word 'Conditional' (73.81%), while for government school students, the highest was also 'Conditional' (89.47%), indicating significant difficulty in understanding its meaning. Among all words tested, 'Opposite' had the lowest error percentage, with private school students committing 47.14% errors, whereas government school students had a higher error rate of 57.89%. This suggests that students had a relatively better understanding of this word but

faced challenges with words like 'Collision' (80.00% in government schools) and 'Merchant' (81.58%), where government school students had significantly higher error rates.
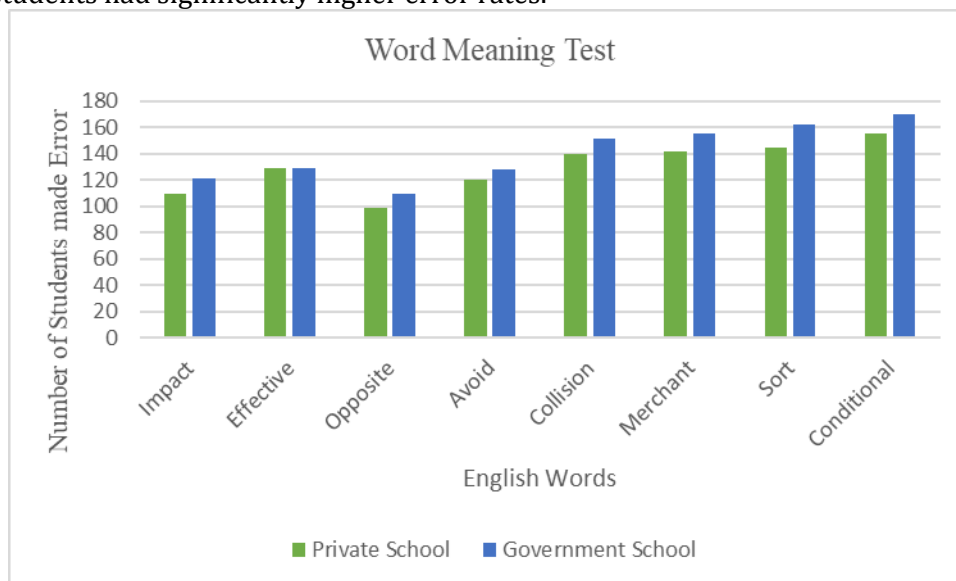

Figure 6. Word meaning test results

4.7. INTERPRETATION OF THE T-TEST RESULTS

The independent t-test conducted on the error percentages of private and government school students revealed a t-statistic of -3.96 and a p-value of 0.00023. These statistical values indicate a significant difference in the performance of the two groups in English as a Second Language (ESL) assessments. The negative t-statistic suggests that private school students had consistently lower error percentages compared to government school students, implying better accuracy in pronunciation, synonym recognition, antonym recognition, abbreviation comprehension, and word meaning tests. The p-value (0.00023) is substantially lower than the conventional threshold of 0.05, meaning that the observed difference is not due to random chance but represents a genuine disparity in ESL performance between the two student groups. Since the p-value is highly significant, we can confidently reject the null hypothesis, which assumed no meaningful difference between the two groups. This confirms that government school students committed significantly more errors in ESL assessments compared to private school students.

The statistical findings suggest systematic differences in English language learning and proficiency, possibly influenced by variations in teaching methodologies, classroom exposure, instructional resources, and socio-economic factors. Government school students exhibited higher error rates across all tested categories, indicating greater struggles in language comprehension and application. This highlights an urgent need for targeted interventions, improved curriculum design, teacher training programs, and exposure to immersive English-learning environments in government schools. In conclusion, the t-test results validate the hypothesis that private school students demonstrate stronger ESL skills compared to government school students, emphasizing the importance of enhanced language education strategies to bridge the gap in English proficiency among higher secondary students in Bhopal.

5. CONCLUSION

The study comprehensively analyzed the challenges faced by higher secondary students in Bhopal while learning English as a second language. Through various tests, including pronunciation, synonym and antonym recognition, abbreviations, and word meaning assessments, it was observed that students from government schools consistently exhibited higher error rates compared to their private school counterparts. This highlights a significant gap in language comprehension, vocabulary retention, and exposure to English communication. Findings suggest that ineffective teaching methods, reliance on rote memorization, socio-economic barriers, and psychological fears of making mistakes contribute to the difficulties faced by students. The study emphasizes that communicative and task-based learning approaches, technology-enhanced education, and continuous teacher training programs can bridge this gap and improve English proficiency among students. Addressing these challenges requires a multi-faceted approach involving curriculum reform, technology integration, and teacher upskilling to create an engaging and interactive ESL learning environment.

By implementing these strategies, students in Bhopal can enhance their language proficiency, improve their academic performance, and increase their competitiveness in higher education and professional fields.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

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